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GP-804
December 19, 1969



JOHN F. KENNEDY SPACE CENTER

APOLLO 12

WATER SERVICING

N70-18466

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APOLLO 12
WATER SERVICING

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**APOLLO 12 WATER SERVICING
ALTITUDE CHAMBER TESTS**

PURPOSE:

THIS REPORT IS A COMPLETE DOCUMENTATION OF THE WATER SERVICING FOR THE APOLLO 12. INCLUDED IS A DISCUSSION OF OPERATIONAL OR HARDWARE INTERFACE PROBLEMS ENCOUNTERED WITH A COPY OF ALL PERTINENT SAMPLE REPORTS.

SCOPE:

THIS WORK COVERS A PERIOD EXTENDING FROM MAY 2, 1969, TO JUNE 18, 1969, FOR THE CHAMBER TESTS AND OCTOBER 10, 1969, TO NOVEMBER 13, 1969, FOR THE LAUNCH COUNT-DOWN.

ALTITUDE CHAMBER TESTS

S/C 108 (COMMAND MODULE)

MAY 23, 1969--SEA LEVEL SIMULATED TEST No. 1 BACK-UP CREW
MAY 28, 1969--SEA LEVEL SIMULATED TEST No. 2 PRIME CREW
JUNE 3, 1969--UNMANNED ALTITUDE CHAMBER TEST
JUNE 7, 1969--ALTITUDE CHAMBER TEST No. 1 PRIME CREW
JUNE 10, 1969--ALTITUDE CHAMBER TEST No. 2 BACK-UP CREW

LM-6 (LUNAR MODULE)

JUNE 3, 1969--SEA LEVEL SIMULATED TEST No. 1 PRIME CREW
JUNE 6, 1969--SEA LEVEL SIMULATED TEST No. 2 BACK-UP CREW
JUNE 11, 1969--UNMANNED ALTITUDE CHAMBER TEST
JUNE 13, 1969--ALTITUDE CHAMBER TEST No. 1 PRIME CREW
JUNE 16, 1969--ALTITUDE CHAMBER TEST No. 2 BACK-UP CREW
JUNE 17, 18, 1969--UNMANNED ALTITUDE CHAMBER TESTS

LAUNCH COUNTDOWN

S/C 108 (COMMAND MODULE)

NOVEMBER 6, 1969, STERILIZATION OF WATER SYSTEM
NOVEMBER 7, 1969, FINAL FILL OF POTABLE TANK FOR LAUNCH
NOVEMBER 13, 1969, T-24 HOUR SAMPLING

LM-6 (LUNAR MODULE)

NOVEMBER 3, 1969, STERILIZATION OF WATER SYSTEM
NOVEMBER 3, 1969, FINAL FILL OF POTABLE TANKS FOR LAUNCH
NOVEMBER 10, 1969, T-4 DAY SAMPLING
NOVEMBER 12, 1969, T-24 HOUR SAMPLING

LAUNCH WAS NOVEMBER 14, 1969, AT 1122 HOURS.

THE SCOPE OF WATER SERVICING INCLUDES THE VERIFICATION OF FACILITY DEMINERALIZED WATER, GROUND SUPPORT EQUIPMENT WATER UNITS (GSE), LUNAR MODULE (LM), COMMAND MODULE (CM) SPACECRAFT, PORTABLE LIFE SUPPORT SYSTEM (PLSS), LIQUID COOLING GARMENT (LCG) AND STERILIZATION OF WATER DISPENSERS (WD).

VERIFICATION OF THESE SYSTEMS REQUIRES CHEMICAL, MICROBIOLOGICAL AND PARTICULATE ANALYSIS. ALL ANALYSES WERE PERFORMED BY ENVIRONMENTAL HEALTH ENGINEERING (EHE) IN THE ENVIRONMENTAL HEALTH LABORATORY LOCATED IN THE OCCUPATIONAL HEALTH FACILITY.

ANALYSIS:

THE SPACECRAFT'S WATER SYSTEMS WERE ANALYZED TO PF SPEC-1A AND LATEST REVISION--1B DATED JUNE 25, 1969. THE PLSS AND LCG WERE VERIFIED BY MSC-C-27 AND THE WATER DISPENSER WAS STERILIZED BY CLEANING PROCEDURE CSD-A-872, REVISION A AND B.

COLLECTION OF SAMPLES WAS CARRIED OUT BY ENVIRONMENTAL HEALTH ENGINEERING PERSONNEL IN ALL INSTANCES AND RETURNED TO THE LABORATORY FOR ANALYSIS EXCEPT FOR PH AND ELECTRICAL CONDUCTIVITY WHICH WERE PERFORMED ON SITE AS REQUIRED.

SAMPLES WERE COLLECTED BY MEANS OF A COMBINATION OF EHE EQUIPMENT, CONTAINERS AND SPECIAL CONTAINERS FURNISHED BY MSC CALLED APOLLO WATER SAMPLING DEVICES (AWSO). THE IONIC SPECIES DETERMINATIONS WERE PERFORMED BY ATOMIC ABSORPTION.

RESULTS:

RESULTS WERE REPORTED IMMEDIATELY IN THE CASE OF ON-SITE ANALYSES AND WITHIN TWENTY-FOUR HOURS BY PHONE ON ALL OTHERS WITH THE WRITTEN REPORT PUBLISHED AFTER THE FINAL RESULTS WERE OBTAINED ON THE BACTERIAL SAMPLES. ANY RESULTS WHICH DEVIATED FROM NORMAL WERE REPORTED TO THE APPROPRIATE TEST CONDUCTOR AND MEDICAL PERSONNEL AS SOON AS THEY WERE AVAILABLE.

DISCUSSION:

CHAMBER TESTS

NONE OF THE ANALYSIS REPORTS FAILED THE SPECIFICATIONS DURING THE ENTIRE CHAMBER TESTS EXCEPT FOR STERILITY REQUIREMENTS, WHICH WERE EXPECTED DUE TO THE LACK OF A BACTERICIDE.

THERE WERE DETECTABLE INCREASES OF THE IONIC SPECIES FOR NICKEL, MAGNESIUM AND ZINC IN THE COMMAND MODULE USE PORTS. THIS CONDITION FOLLOWS THE USUAL PATTERN EXPERIENCED IN THE PREVIOUS SPACECRAFTS.

THE STERILIZATION OF THE WATER DISPENSER PROCEDURE WAS MODIFIED DURING THIS PERIOD BY INCREASING THE IODINE BACTERICIDE SOLUTION TO (80-100) PARTS PER MILLION (PPM). THIS INCREASE FROM 20-30 PPM WAS NECESSARY BECAUSE OF THE RECENT AND RATHER CONSISTENT FAILURES EXPERIENCED. THE INCREASE IN IODINE CONCENTRATION WAS THE ONLY CHANGE FROM THE METHOD USED PREVIOUSLY AND THE RESULTS LOOK QUITE PROMISING AT THIS TIME. THE PACKAGING OF THE WATER DISPENSER AS MENTIONED IN PREVIOUS REPORTS STILL IS A PROBLEM AREA. THE 2-MIL ACLAR BAGS USED TO BAG THE DISPENSERS AFTER THE STERILIZATION PROCEDURE WILL NOT REMAIN VACUUM SEALED FOR ANY PERIOD OF TIME. STEPS ARE PRESENTLY BEING MADE TO EITHER USE A LAMINATED MATERIAL OR TEFLON FEP.

LAUNCH COUNTDOWN

INABILITY TO MEET THE STERILITY REQUIREMENT OF THE PF SPEC-1B CONTINUES TO BE THE SOLE TROUBLE AREA FOR COMMAND MODULE SAMPLES. THIS SITUATION DOES NOT

EXIST FOR THE LUNAR MODULE SINCE IODINE RESIDUAL IS MAINTAINED IN THE POTABLE WATER SYSTEM DURING THE ENTIRE WATER SERVICING. DUE TO THE CORROSIVE PROPERTY OF THE CHLORINE USED AS THE BACTERICIDE IN THE COMMAND MODULE, THE POTABLE WATER IS LOADED WITHOUT ANY ANTIBACTERIAL AGENT UNTIL A TIME JUST PRIOR TO LAUNCH. THIS PROCEDURE HAS CONSISTENTLY CAUSED THE WATER SAMPLES COLLECTED FROM THE COMMAND MODULE TO FAIL THE STERILITY REQUIREMENTS OF THE SPECIFICATION.

THE ABOVE SITUATION DEPICTS THE ONLY FAILURE ENCOUNTERED DURING THE WATER SERVICING FOR LAUNCH COUNTDOWN OF EITHER SPACECRAFT.

AN ADDITIONAL TROUBLE AREA DEVELOPED AS A RESULT OF THE EARLY LOADING OF WATER ABOARD THE LUNAR MODULE. THIS EARLY LOADING (AT T-10 DAYS) REQUIRED ADDITIONAL SAMPLING AT T-7 DAYS. THE ADDITIONAL SAMPLING STEP AT T-7 DAYS REDUCED THE AVAILABLE VOLUME FOR THE T-24 HOUR SAMPLE. MEASURES ARE PRESENTLY BEING TAKEN TO PREVENT THIS PROBLEM ON FUTURE LOADINGS.

THE DEPLETION RATE OF IODINE IN THE LUNAR MODULE-6 POTABLE WATER DESCENT TANK WAS CONSIDERABLY LESS THAN ANTICIPATED. THE DEPLETION DURING LAUNCH COUNTDOWN WAS APPROXIMATELY 0.2 PPM/DAY COMPARED TO 1 PPM/DAY DEMONSTRATED ON PREVIOUS SPACECRAFTS. THIS SHIFT IN RATE OF DEPLETION MAY INFLUENCE THE INITIAL LOAD CONCENTRATION WHICH IS BASED ON THE AMOUNT REQUIRED ON FINAL CONSUMPTION SOME 2½ WEEKS LATER ON THE LUNAR SURFACE.

TABLE I

SAMPLE VOLUMES FOR KSC AND MSC (2)

ANALYSIS	TEST POINT ONE FACILITY D.I.		TEST POINT TWO G.S.E. UNIT		TEST POINT THREE C/H DRINK GUN		TEST POINT THREE DESCENT TANK	
	1 - ON SITE	1 - ON SITE	1 - ON SITE	1 - ON SITE	NONE REQUIRED	NONE REQUIRED	NONE REQUIRED	NONE REQUIRED
ELECTRICAL CONDUCTIVITY	1 - ON SITE	1 - ON SITE	1 - ON SITE	1 - ON SITE	NONE REQUIRED	NONE REQUIRED	NONE REQUIRED	NONE REQUIRED
PH	1 - ON SITE	1 - ON SITE	1 - ON SITE	1 - ON SITE	PERFORM FROM TASTE & ODOR VOLUME AT LAB	PERFORM FROM TASTE & ODOR VOLUME AT LAB	PERFORM FROM TASTE & ODOR VOLUME AT LAB	PERFORM FROM TASTE & ODOR VOLUME AT LAB
STERILITY	1 - 10 ML 500 ML	1 - 10 ML 500 ML	1 - 10 ML 500 ML	1 - 10 ML 500 ML	1 - 10 ML 500 ML	1 - 10 ML 500 ML	1 - 10 ML 500 ML	1 - 10 ML 500 ML
PARTICULATE	NONE REQUIRED	1 - 500 ML	1 - 500 ML	1 - 500 ML	NONE REQUIRED	NONE REQUIRED	1 - 500 ML	1 - 500 ML
TOTAL RESIDUE	1 - 1,000 ML	1 - 1,000 ML	PERFORMED FROM TASTE & ODOR VOLUME	1 - 500 ML	PERFORMED FROM TASTE & ODOR VOLUME	NONE PERFORMED	PERFORMED FROM TASTE & ODOR VOLUME	1 - 500 ML
TASTE AND ODOR								
TURBIDITY								
COLOR, TRUE								
BACTERICIDE								
IONIC SPECIES								
	NONE REQUIRED	2 - 2,000 ML (3)	1 - 2,000 ML (1)	1 - 1,000 ML (1)	1 - 2,000 ML (1)	1 - 1,000 ML (1)	1 - 2,000 ML (1)	1 - 2,000 ML (1), (4)
TOTAL VOLUME	1,500 ML 10 ML (KSC)	2,000 ML (MSC) 3,000 ML 10 ML (KSC)	2,000 ML (KSC) 10 ML 1,000 ML (MSC)	1,000 ML (KSC) 10 ML 500 ML (MSC)	2,000 ML (KSC) 10 ML 1,000 ML (MSC)	1,000 ML (KSC) 10 ML 500 ML (MSC)	2,000 ML (KSC) 10 ML 1,000 ML (MSC)	2,000 ML (KSC) 10 ML 1,000 ML (MSC)

NOTES: 1. SAMPLE IS SPLIT FOR SHIPMENT TO MSC.

2. ALL SAMPLES COLLECTED IN SAMPLE CONTAINERS
FURNISHED BY MSC, EXCEPT THE PARTICLE SAMPLES.

3. NO SAMPLE IS TAKEN FOR MSC ON L/M CHAMBER RUNS.

4. IODINE CONCENTRATION MUST BE VERIFIED ON-SITE AT SAMPLING TIME.

APPENDIX A

CHRONOLOGY OF APOLLO 12 WATER SERVICING
FOR LAUNCH COUNTDOWN

<u>DATE</u>	<u>HOUR</u>	<u>EHE LOG NO.</u>	<u>ANALYSIS REQUESTED</u>
10/10/69	2400	6910-18	VERIFICATION OF FACILITY DEMINERALIZER SYSTEM
10/21/69		6910-40	G.S.E., T.P.-2 PRE I ₂ OF LM-6
11/3/69	0900	6911-1	IODINE INJECTION, VERIFICATION IN G.S.E.
11/3/69	1430	6911-2	G.S.E. T.P.-2 POST I ₂ OF LM-6
11/3/69	1300	6911-3	I ₂ RESIDUAL IN LM-6 FOR STERILIZATION SOAK
11/3/69	1730	6911-4	DESCENT TANK OF LM-6 FINAL FILL
11/4/69	1700	6911-8	I ₂ VERIFICATION IN DESCENT TANK, LM-6
11/5/69	1300	6911-9	G.S.E. T.P.-2 PRE CL ₂ OF S/C 108
11/5/69	1500	6911-11	CL ₂ INJECTION AND VERIFICATION
11/6/69	0300	6911-12	CL ₂ RESIDUAL IN SOAK SOLUTION OF S/C 108
11/6/69	1130	6911-13	G.S.E. T.P.-2 POST CL ₂ OF S/C 108
11/7/69	0800	6911-15 G,H	POTABLE TANK OF S/C 108 FINAL FILL
11/10/69	1100	6911-22	DESCENT TANK T-4 DAYS OF LM-6
11/12/69	1630	6911-31	DESCENT TANK T-24 HOURS OF LM-6
11/13/69	0500	6911-32 G,H	POTABLE TANK T-24 HOURS OF S/C 108



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



35.1

Requestor, Organization, Mail Code R. DAMBERT, GRUMMAN GAEC-47	Request Date OCTOBER 10, 1969
	Phone 7-2045
Sample Description APOLLO WATER FROM FACILITY WATER DEMINERALIZER SYSTEM	Analysis Requested (Specification Required) PF SPEC-1B
Location PAD 30A - 3C LEVEL	

Received by GUENTHER Date 10/10/69 (2400) Log Number 6910-10
Priority: Routine _____ (Due Date) _____ A.S.A.P. _____ Emergency _____

ANALYSIS:

PH = 7.2 @ 25°C

ELECTRICAL CONDUCTIVITY = .28 MICROMHOS/CM @ 25°C

TOTAL RESIDUE = 1.4 MG/L

STERILITY:

TOTAL BACTERIA = 18,800 COLONIES/100 ML

COLIFORM COUNT = NEGATIVE

ANAEROBIC ANALYSIS = NEGATIVE

YEAST AND MOLDS = NEGATIVE

THIS PASSES THE REQUESTED ANALYSIS.

CC: ED WRIGHT, LS-BIG-32

Analyst BUCK IB Date Completed OCTOBER 14, 1969
Approved by P. LaTone Reference Notebook _____
P. LATONE, MGR., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



25.1

Requestor, Organization, Mail Code R. JANDERT GAEC-47	Request Date OCTOBER 21, 1967
	Phone 867-2445
Sample Description APOLLO POTABLE WATER FROM CSE AT LM-6, APOLLO 12, PNE 1 ₂	Analysis Requested (Specification Required) PF SPEC-1B TO TEST POINT 2
Location PAD 311, 3C LEVEL	

Received by McMURTER Date 11/21/67 Log Number 6016-40
Priority: Routine _____ (Due Date) _____ A.S.A.P. _____ Emergency _____

ANALYSIS:

ELECTRICAL CONDUCTIVITY = 0.2 MICROMHOS/CM @ 25°C

PH = 7.4 @ 25°C

TOTAL RESIDUE = UNDER .5 MG/L

FIXED RESIDUE = UNDER .5 MG/L

TASTE AND ODOR = NONE (THRESHOLD NO. 3)

TURBIDITY = .14 UNITS

COLOR, TRUE = UNDER 5 UNITS

PARTICULATES/500 ML

0-10 MICRONS = PASSES

11-25 MICRONS = 1

25-50 MICRONS = 0

50-100 MICRONS = 0

OVER 100 MICRONS = 0

THIS REPORT PASSES THE REQUESTED ANALYSIS.

CC: ED WRIGHT, LS-ENG-32
MSC PREVENTIVE MEDICINE DIV., EC-7
MSC CREW SYSTEMS DIVISION, EC-5
MSC LAUNCH SITE MEDICAL OPS. BRANCH, DJK

IONIC SPECIES:

CADMIUM	UNDER	0.005	MG/L
CHROMIUM	UNDER	0.05	MG/L
COPPER	UNDER	0.05	MG/L
IRON	UNDER	0.1	MG/L
LEAD	UNDER	0.05	MG/L
MANGANESE	UNDER	0.01	MG/L
MERCURY	UNDER	0.005	MG/L
NICKEL	UNDER	0.03	MG/L
SILVER	UNDER	0.05	MG/L
ZINC	UNDER	0.03	MG/L
MAGNESIUM	UNDER	0.003	MG/L
IODIDE	UNDER	0.1	MG/L
LITHIUM	UNDER	0.5	MG/L
POTASSIUM	UNDER	0.05	MG/L
SILICON	UNDER	0.5	MG/L

STERILITY:

TOTAL BACTERIA = 30,000/150 ML
COLIFORM COUNT = NEGATIVE
ANAEROBIC ANALYSIS = NEGATIVE
YEAST AND MOLD = NEGATIVE

Analyst DICK G.B. Date Completed 11/23/67
Approved by [Signature] Reference Notebook _____
P. LATO RE, HEN., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



351

Requestor, Organization, Mail Code

R. DANDERT, GAEC
GAEC-47

Request Date

NOVEMBER 3, 1960

Phone

867-6070

Sample Description

APOLLO POTABLE WATER FOR IODINE
SOAK SOLUTION IN LH-6 OF APOLLO 12

Analysis Requested (Specification Required)

VERIFICATION OF IODINE IN
GROUND SUPPORT UNIT

Location

PAD 30A, 3C LEVEL

Received by BUCK, McMINISTER Date 11/3/60 (1960) Log Number 6011-1

Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

IODINE = 30 MG/L

cc: ED WRIGHT, LS-ENG-32

AB

Analyst P. LaTone

Date Completed NOVEMBER 4, 1960

Approved by _____

Reference Notebook _____

P. LATONE, HON., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code R. GAMBERT GAEC-41	Request Date NOVEMBER 3, 1967 Phone 7-6070
Sample Description APOLLO PORTABLE WATER FROM G.S.E. POST 1 ₂ FOR FINAL FILL OF LIL-6 OF APOLLO 12	Analysis Requested (Specification Required) PF SPEC-1B 10 TEST POINT 2
Location PAD 3A, 3C LEVEL	

Received by BUCK, HOLMES Date 11/3/67 (1430) Log Number 911-2
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

ELECTRICAL CONDUCTIVITY = 0.40 MICROMHOS @ 25°C

pH = 6.0 @ 25°C

TOTAL RESIDUE = 1.1 MG/L

FIXED RESIDUE = .5 MG/L

TASTE AND ODOR = NONE @ THRESHOLD No. 3

TURBIDITY = 0.2 UNITS

COLOR, TRUE = UNDER 5 UNITS

PARTICULATES/500 ML

0-10 MICRONS = PASSES

10-25 MICRONS = 28

25-50 MICRONS = 14

50-100 MICRONS = 3

OVER 100 MICRONS = 1

THIS REPORT PASSES THE REQUESTED ANALYSIS.

CC: ED WRIGHT, LS-ENG-32

HSC PREVENTIVE MEDICINE DIV., EC-7

HSC CREW SYSTEMS DIVISION, EC-3

HSC LAUNCH SITE MEDICAL OPS. BRANCH, DOK

IONIC SPECIES:

CADMIUM	UNDER	0.005	MG/L
CHROMIUM	UNDER	0.05	MG/L
COPPER	UNDER	0.05	MG/L
IRON	UNDER	0.1	MG/L
LEAD	UNDER	0.05	MG/L
MANGANESE	UNDER	0.01	MG/L
MERCURY	UNDER	0.005	MG/L
NICKEL	UNDER	0.03	MG/L
SILVER	UNDER	0.05	MG/L
ZINC	UNDER	0.03	MG/L
MAGNESIUM	EQUALS	0.004	MG/L
IODIDE	UNDER	0.1	MG/L
ALUMINUM	UNDER	0.5	MG/L
POTASSIUM	UNDER	0.05	MG/L
SILICA	UNDER	0.5	MG/L

STERILITY:

TOTAL BACTERIA = NEGATIVE
COLIFORM COUNT = NEGATIVE
ANAEROBIC ANALYSIS = NEGATIVE
YEAST AND MOLDS = NEGATIVE

Analyst GUENTHER/ HENDERSON/BUCK Date Completed NOVEMBER 5, 1967
Approved by [Signature] Reference Notebook _____
P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code

R. DANDERT, GAEC
GAEC-41

Request Date

NOVEMBER 3, 1966

Phone

7-0070

Sample Description

APOLLO WATER FROM ASCENT AND DESCENT
TANKS OF LM-6 DURING STERILIZATION SOAK

Analysis Requested (Specification Required)

IODINE CONCENTRATION

Location

PAD 30A, 3C LEVEL

Received by McCLAY, DUCK

Date 11/3/66 (1300)

Log Number 0011-3

Priority: Routine

(Due Date)

A.S.A.P.

Emergency

ANALYSIS:

IODINE CONCENTRATION MG/L

TIME

DESCENT TANK

ASCENT TANK

1310

20*

-

1330

20

20

1340

20

20

1353

20

20

1404

20

20

*THIS SAMPLE RESULT WAS NOT ACCEPTABLE TO GAEC Q.C. ON STATION AT THE LM HATCH
AND WAS REPEATED.

cc: Ed Wright, LS-ENG-32

Analyst

BUCK

Date Completed NOVEMBER 5, 1966

Approved by

P. LATORRE, NGR., ENVIRONMENTAL HEALTH ENGINEERING

Reference Notebook



K S C
ENVIRONMENTAL HEALTH ENGINEERING
 Analysis Report



Requestor, Organization, Mail Code R. DANDERT GAEC 41	Request Date NOVEMBER 3, 1969 <hr/> Phone 7-6070
Sample Description APOLLO POTABLE WATER FROM DESCENT TANK OF LH-5 OF APOLLO 12 FOR FINAL FILL	Analysis Requested (Specification Required) PF SPEC 1B TO TEST POINT 3
Location PAD 30A, 3C LEVEL	

Received by NO WATER Date 11/3/69 (1730) Log Number 611-4
 Priority: Routine _____ (Due Date) _____ A.S.A.P. _____ Emergency _____

ANALYSIS:

pH = 5.0 @ 25°C
 TOTAL RESIDUE = 1.8 MG/L
 TASTE AND ODOR = NONE @ THRESHOLD ODOR No. 5
 TURBIDITY = 0.2 UNITS
 COLOR, TRUE = 65 UNITS
 PARTICULATE/500 ML
 0-10 MICRONS = 16
 10-25 MICRONS = 82
 25-50 MICRONS = 22
 50-100 MICRONS = 0
 100-250 MICRONS = 0
 OVER 250 MICRONS = 0

THIS REPORT PASSES THE REQUESTED ANALYSIS.

CC: ED WRIGHT, LS-ENG-32
 MSC PREVENTIVE MEDICINE DIV., JC-7
 MSC CREW SYSTEMS DIV., EC-3
 MSC LAUNCH SITE MEDICAL OPS. BRANCH, JOK

IONIC SPECIES:

CADMIUM	UNDER	0.005	MG/L
CHROMIUM	UNDER	0.05	MG/L
COPPER	UNDER	0.05	MG/L
IRON	UNDER	0.1	MG/L
LEAD	UNDER	0.05	MG/L
MANGANESE	UNDER	0.01	MG/L
MERCURY	UNDER	0.005	MG/L
NICKEL	EQUALS	0.03	MG/L
SILVER	UNDER	0.05	MG/L
ZINC	UNDER	0.03	MG/L
MAGNESIUM	EQUALS	0.006	MG/L
IODIDE	EQUALS	1.5	MG/L
ALUMINUM	UNDER	0.5	MG/L
POTASSIUM	UNDER	0.05	MG/L
SILICA	UNDER	0.5	MG/L
*IODINE	EQUALS	19	MG/L

STERILITY:

TOTAL BACTERIA = NEGATIVE
 COLIFORM COUNT = NEGATIVE
 ANAEROBIC ANALYSIS = NEGATIVE
 YEAST AND MOLDS = NEGATIVE
 *IODINE CONCENTRATION IN ASCENT TANK SAMPLED AT THE SAME TIME WAS 13 MG/L

Analyst ANDERSON/GUENTHER Date Completed NOVEMBER 5, 1969
 Approved by [Signature] Reference Notebook _____
 J.P. LATORE, MGR., ENVIRONMENTAL HEALTH ENGINEERING

35.1 file



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code H. CROSKY, NR ZK-86	Request Date NOVEMBER 5, 1969
	Phone 7-3793
Sample Description APOLLO POTABLE WATER FROM G.S.E. PRE-CL ₂ FOR S/C 108 OF APOLLO 12	Analysis Requested (Specification Required) PF SPEC 1B TO TEST POINT 2
Location PAD 39A, 4C LEVEL	

Received by WRIGHT Date 11/5/69 (1300) Log Number 6911-9
 Priority: Routine _____ A.S.A.P. _____ Emergency _____
 (Due Date)

ANALYSIS:

ELECTRICAL CONDUCTIVITY = .37 MICROMHOS/CM @ 25°C
 pH = 6.3 @ 25°C
 TOTAL RESIDUE = UNDER 0.5 MG/L
 FIXED RESIDUE = UNDER 0.5 MG/L
 TASTE AND ODOR = NONE @ THRESHOLD No. 3
 TURBIDITY = 0.15 UNITS
 COLOR, TRUE = UNDER 5 UNITS
 PARTICULATES/500 ML
 0-10 MICRONS = PASSES
 10-25 MICRONS = 44
 25-50 MICRONS = 10
 50-100 MICRONS = 4
 OVER 100 MICRONS = 2

IONIC SPECIES:

CADMIUM	UNDER	0.005	MG/L
CHROMIUM	UNDER	0.05	MG/L
COPPER	UNDER	0.05	MG/L
IRON	UNDER	0.1	MG/L
LEAD	UNDER	0.05	MG/L
MANGANESE	UNDER	0.01	MG/L
MERCURY	UNDER	0.005	MG/L
NICKEL	UNDER	0.03	MG/L
SILVER	UNDER	0.05	MG/L
ZINC	UNDER	0.03	MG/L
MAGNESIUM	EQUALS	0.008	MG/L
CHLORIDE	EQUALS	0.0	MG/L
ALUMINUM	UNDER	0.5	MG/L
POTASSIUM	UNDER	0.05	MG/L
SILICA	UNDER	0.5	MG/L

STERILITY:

TOTAL BACTERIA = 8 COL/150 ML
 COLIFORM COUNT = NEGATIVE
 ANAEROBIC ANALYSIS = NEGATIVE
 YEAST AND MOLDS = 12 COL/150 ML

THIS REPORT PASSES THE REQUESTED ANALYSIS.

CC: ED WRIGHT, LS-ENG-32
 MSC PREVENTIVE MEDICINE DIV., DC-7
 MSC CREW SYSTEMS DIV., EC-3
 MSC LAUNCH SITE MEDICAL OPS. BRANCH, DDK
 NORTH AMERICAN ROCKWELL, DOWNEY, CALIF.

Analyst GUENTHER/BUCK GB Date Completed NOVEMBER 11, 1969
 Approved by P. LaTorre Reference Notebook _____
 P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING

35. /



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code H. CROSEY, NR ZK-86	Request Date NOVEMBER 5, 1 69 Phone 7-5182
Sample Description CHLORINE CONCENTRATION IN SOAK SOLUTION AFTER INJECTION IN SODIUM HYPOCHLORIDE	Analysis Requested (Specification Required) CHLORINE CONCENTRATION
Location PAD 30 , 4C LEVEL	

Received by ANDERSON Date 11/5/60 (1500) Log Number 6011-11
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

CHLORINE = 8 MG/L

cc: Ed Wright, LS-ENG-32

Analyst Buck Date Completed NOVEMBER 10, 1969
Approved by P. La Torre Reference Notebook _____
P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING

35.1



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code H. CROSKY, NR ZK-86	Request Date NOVEMBER 6, 1969 Phone 7-5182
Sample Description CHLORINE RESIDUAL IN CHLORINE SOAK SOLUTION OF S/C 108, APOLLO 12 Location PAD 30A, 4C LEVEL	Analysis Requested (Specification Required) CHLORINE CONCENTRATION

Received by ANDERSON, McWHINTER Date 11/6/61 (0300) Log Number 6011-12
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

TIME	CHLORINE CONCENTRATION IN MG/L		
	DRINK GUN	HOT PORT	COLD PORT
0330	8	6	6
0400	7	6	6
0430	6	6	6
0500	6	5	6
0530	5	5	5

cc: Ed Wright, LS-ENG-32

Analyst Buck JB Date Completed NOVEMBER 10, 1963
Approved by [Signature] Reference Notebook _____
P. LATOKE, MGR., ENVIRONMENTAL HEALTH ENGINEERING

35.1 file



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code H. CROSKEYS, NR ZK-86	Request Date 11/6/69
	Phone 7-3793
Sample Description APOLLO POTABLE WATER FROM G.S.E. POST-CHLORINE OF S/C 108 OF APOLLO 12	Analysis Requested (Specification Required) PF SPEC 1B TO TEST POINT 2
Location PAD 39A, 4C LEVEL	

Received by ANDERSON/WRIGHT Date 11/6/69 (1130) Log Number 6911-13
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

ELECTRICAL CONDUCTIVITY = 0.22 MICROMHOS/CM @ 25°C

PH = 6.3 @ 25°C

TOTAL RESIDUE = 0.5 MG/L

FIXED RESIDUE = UNDER 0.5 MG/L

TASTE AND ODOR = NONE @ THRESHOLD No. 3

TURBIDITY = 0.10 UNITS

COLOR, TRUE = UNDER 5 UNITS

PARTICULATES/500 ML

0-10 MICRONS = PASSES
10-25 MICRONS = 8
25-50 MICRONS = 2
50-100 MICRONS = 0
OVER 100 MICRONS = 1

IONIC SPECIES:

CADMIUM	UNDER	0.005	MG/L
CHROMIUM	UNDER	0.05	MG/L
COPPER	UNDER	0.05	MG/L
IRON	UNDER	0.1	MG/L
LEAD	UNDER	0.05	MG/L
MANGANESE	UNDER	0.01	MG/L
MERCURY	UNDER	0.005	MG/L
NICKEL	EQUALS	0.03	MG/L
SILVER	UNDER	0.05	MG/L
ZINC	UNDER	0.05	MG/L
MAGNESIUM	EQUALS	0.01	MG/L
CHLORIDE	EQUALS	0.0	MG/L
ALUMINUM	UNDER	0.5	MG/L
POTASSIUM	UNDER	0.05	MG/L
SILICA	UNDER	0.5	MG/L

STERILITY:

THIS REPORT PASSES THE REQUESTED ANALYSIS.

CC: ED WRIGHT, LS-ENG-32
MSC PREVENTIVE MEDICINE DIV., DC-7
MSC CREW SYSTEMS DIVISION, EC-3
MSC LAUNCH SITE MEDICAL OPS. BRANCH, DDK
NORTH AMERICAN ROCKWELL, DOWNEY, CALIF.

TOTAL BACTERIA = 300 COL/150 ML
COLIFORM COUNT = NEGATIVE
ANAEROBIC ANALYSIS = NEGATIVE
YEAST & MOLDS = NEGATIVE

Analyst BUCK *QB* Date Completed NOVEMBER 11, 1969
Approved by *P. La Torre* Reference Notebook _____
P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code H. CROSKY, NR ZK-86	Request Date NOVEMBER 7, 1969
	Phone 7-5182
Sample Description APOLLO POTABLE WATER FROM DRINK GUN OF S/C 108, APOLLO 12 FOR FINAL FILL	Analysis Requested (Specification Required) PF SPEC 1B TO TEST POINT 3
Location PAD 39A, 4C LEVEL	

Received by Buck Date 11/7/69 (0800) Log Number 6911-15G
Priority: Routine (Due Date) A.S.A.P. Emergency

ANALYSIS:

PH = 6.3 @ 25°C

TOTAL RESIDUE = UNDER 1 MG/L

TASTE AND ODOR = NONE @ THRESHOLD ODOR NO. 3

TURBIDITY = .04 UNITS

COLOR, TRUE = UNDER 5 UNITS

PARTICULATE/500 ML

- 0-10 MICRONS = PASSES
- 10-25 MICRONS = 600
- 25-50 MICRONS = 27
- 50-100 MICRONS = 2
- 100-250 MICRONS = 2

**THIS REPORT PASSES THE REQUESTED ANALYSIS,
WITH THE EXCEPTION OF STERILITY.**

cc: ED WRIGHT, LS-ENG-32
MSC PREVENTIVE MEDICINE DIV., DC-7
MSC CREW SYSTEMS DIV., EC-3
MSC LAUNCH SITE MEDICAL OPS. BRANCH, DDK
NORTH AMERICAN ROCKWELL, DOWNEY, CALIF.

IONIC SPECIES:

CADMIUM	UNDER	0.005	MG/L
CHROMIUM	UNDER	0.05	MG/L
COPPER	UNDER	0.05	MG/L
IRON	UNDER	0.1	MG/L
LEAD	UNDER	0.05	MG/L
MANGANESE	UNDER	0.01	MG/L
MERCURY	UNDER	0.005	MG/L
NICKEL	EQUALS	0.03	MG/L
SILVER	UNDER	0.05	MG/L
ZINC	UNDER	0.03	MG/L
MAGNESIUM	EQUALS	0.01	MG/L
CHLORIDE	EQUALS	0.0	MG/L
ALUMINUM	UNDER	0.5	MG/L
POTASSIUM	UNDER	0.05	MG/L
SILICA	UNDER	0.5	MG/L
CHLORINE	UNDER	0.1	MG/L

STERILITY:

TOTAL BACTERIA = 1200 COL/150 ML
COLIFORM COUNT = NEGATIVE
ANAEROBIC ANALYSIS = NEGATIVE
YEAST AND MOLDS = 1 COL/150 ML

Analyst GUENTHER/ANDERSON/BUCK ^{ab} Date Completed NOVEMBER 11, 1969
Approved by P. LaTorre Reference Notebook _____
P. LaTorre, MGR., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code H. CROSKY, NR ZK-86	Request Date NOVEMBER 7, 1969 Phone 7-5182
Sample Description APOLLO POTABLE WATER FROM HOT PORT OF S/C 108, APOLLO 12, FOR FINAL FILL	Analysis Requested (Specification Required) PF SPEC 1B TO TEST POINT 3
Location PAD 39A, 4C LEVEL	

Received by McWHIRTER Date 11/7/69 (0800) Log Number 6911-15H
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

pH = 6.3 @ 25°C
TOTAL RESIDUE = 1 MG/L
TASTE AND ODOR = NONE @ THRESHOLD ODOR No. 3
TURBIDITY = .04 UNITS
COLOR, TRUE = UNDER 5 UNITS

THIS REPORT PASSES THE REQUESTED ANALYSIS,
WITH THE EXCEPTION OF STERILITY.

CC: ED WRIGHT, LS-ENG-32
MSC PREVENTIVE MEDICINE DIV., DC-7
MSC CREW SYSTEMS DIV., EC-3
MSC LAUNCH SITE MEDICAL OPS. BRANCH, DDK
NORTH AMERICAN ROCKWELL, DOWNEY, CALIF.

IONIC SPECIES:

CADMIUM	UNDER	0.005	MG/L
CHROMIUM	UNDER	0.05	MG/L
COPPER	UNDER	0.05	MG/L
IRON	UNDER	0.1	MG/L
LEAD	UNDER	0.05	MG/L
MANGANESE	UNDER	0.01	MG/L
MERCURY	UNDER	0.005	MG/L
NICKEL	EQUALS	0.08	MG/L
SILVER	UNDER	0.05	MG/L
ZINC	UNDER	0.03	MG/L
MAGNESIUM	EQUALS	0.025	MG/L
CHLORIDE	EQUALS	0.0	MG/L
ALUMINUM	UNDER	0.5	MG/L
POTASSIUM	UNDER	0.05	MG/L
SILICA	UNDER	0.5	MG/L
CHLORINE	UNDER	0.1	MG/L

STERILITY:

TOTAL BACTERIA = 105,000 COL/
150 ML
COLIFORM COUNT = NEGATIVE
ANAEROBIC ANALYSIS = NEGATIVE
YEAST AND MOLDS = NEGATIVE

Analyst GUENTHER/ANDERSON/BUCK AB Date Completed NOVEMBER 11, 1969
Approved by P. LaTorre Reference Notebook _____
P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR.



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code

Ed CA VELLI, GPEC
GPEC-51

Request Date

November 15, 1967

Phone

800-2745

Sample Description

APOLLO PO ADL WATER FROM DESCENT
TANK THROUGH DRINK CUP
LH-1, APOLLO 12, T-14 HOURS

Analysis Requested (Specification Required)

PF SPEC 13 TO TEST POINT 3

Location

PAD 314, 3A LEVEL

Received by

BUCK

Date

11/17/67 (1035)

Log Number

011-21

Priority:

Routine

(Due Date)

A.S.A.P.

Emergency

ANALYSIS:

pH = 4.6 @ 25°C

TOTAL RESIDUE = 1.0 MG/L

TASTE AND ODOR = NONE ? THRESHOLD ODOR No. 7

Turbidity = 0.3 UNITS

Color, TRUE = 70 UNITS

THIS REPORT PASSES THE REQUESTED ANALYSIS.

cc: Ed WRIGHT, LS-GPC-52
HSC PREVENTIVE MEDICINE DIV., LC-7
HSC CREW SYSTEMS DIV., EC-3
HSC LAUNCH SITE MEDICAL OPS. BRANCH, JCK

IONIC SPECIES:

CADMIUM	UNDER	0.005	MG/L
CHLORIDE	UNDER	0.00	MG/L
COPPER	EQUALS	0.00	MG/L
IRON	UNDER	0.1	MG/L
LEAD	UNDER	0.05	MG/L
MANGANESE	UNDER	0.01	MG/L
MERCURY	UNDER	0.005	MG/L
NICKEL	EQUALS	0.07	MG/L
SILVER	UNDER	0.05	MG/L
ZINC	UNDER	0.05	MG/L
MAGNESIUM	EQUALS	0.005	MG/L
IODINE	EQUALS	0	MG/L
FLUORINE	UNDER	0.5	MG/L
POTASSIUM	UNDER	0.05	MG/L
SILICA	UNDER	0.5	MG/L
IODINE	EQUALS	7.5	MG/L

STERILITY:

TOTAL BACTERIA = NEGATIVE
COLIFORM COUNT (NOT PERFORMED)
THABROMIC ANALYSIS (DUE TO INSUFFICIENT
YEAST AND MOLES) (ICIENT
VOLUME.

Analyst

BUCK

Date Completed

November 17, 1967

Approved by

P. LAYNE, NOR., ENVIRONMENTAL HEALTH ENGINEERING

Reference Notebook



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code Ed CALVELLI, GAEC GAEC-51	Request Date NOVEMBER 13, 1969
	Phone 067-2945
Sample Description APOLLO POTABLE WATER FROM DRINK CUP, LH- , APOLLO 12, FLUSH SAMPLE (FIRST 300 ML)	Analysis Requested (Specification Required) PF SPEC 1B TO TEST POINT 3
Location PAD 37A, 3C LEVEL	

Received by DUCK Date 11/12/69 (1030) Log Number 6-11-31
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

pH = 4.8 @ 25°C
TOTAL RESIDUE = *
TASTE AND ODOR = NONE @ THRESHOLD ODOR No. 5
TURBIDITY = 0.5 UNITS
COLOR, TRUE = UNDER 5 UNITS

THIS REPORT IS FOR REFERENCE ONLY.

cc: Ed WRIGHT, LS-ENG-32
MSC PREVENTIVE MEDICINE DIV., DC-7
MSC CREW SYSTEMS DIV., EC-3
MSC LAUNCH SITE MEDICAL OPS. BRANCH, DOK

IONIC SPECIES:

CADMIUM	EQUALS	0.01	MG/L
CHROMIUM	UNDER	0.05	MG/L
COPPER	EQUALS	0.07	MG/L
IRON	UNDER	0.1	MG/L
LEAD	UNDER	0.05	MG/L
MANGANESE	EQUALS	0.01	MG/L
*MERCURY	UNDER	1	MG/L
NICKEL	EQUALS	0.03	MG/L
SILVER	UNDER	0.05	MG/L
ZINC	EQUALS	0.2	MG/L
MAGNESIUM	EQUALS	0.09	MG/L
IODIDE	EQUALS	5.4	MG/L
ALUMINUM	EQUALS	0.5	MG/L
POTASSIUM	EQUALS	0.1	MG/L
SILICA	UNDER	0.5	MG/L

*STERILITY

*INSUFFICIENT SAMPLE VOLUME.

Analyst DUCK Date Completed NOVEMBER 17, 1969
Approved by P. Latorre Reference Notebook _____
P. LATORRE, TCR., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code

H. CROSKY, BAR
ZK-86

Request Date

NOVEMBER 13, 1969

Phone

867-5182

Sample Description

APOLLO PO ABL E WATER FROM DRINK GUN
OF S/C 100, APOLLO 12, T-24 HOURS

Analysis Requested (Specification Required)

PF SPEC 13 TO TEST POINT 3

Location

PAD 30A, 4C LEVEL

Received by MCWHIRTER

Date 11/13/69 (USE)

Log Number 6-11-520

Priority: Routine

(Due Date)

A.S.A.P.

Emergency

ANALYSIS:

PH = 6.1 @ 25°C

TOTAL RESIDUE = 1.2 MG/L

TASTE AND ODOR = NONE @ THRESHOLD ODOR No. 4

TURBIDITY = 0.5 UNITS

COLOR, TRUE = UNDER 5 UNITS

PARTICULATE/500 ML

0-10 MICRONS = PASSES

10-25 MICRONS = 1.40

25-50 MICRONS = 72

50-100 MICRONS = 56

100-250 MICRONS = 0

IONIC SPECIES:

CADMIUM	EQUALS	0.005	MG/L
CHLORIDE	UNDER	0.05	MG/L
COPPER	UNDER	0.05	MG/L
IRON	UNDER	0.1	MG/L
LEAD	UNDER	0.05	MG/L
MANGANESE	UNDER	0.01	MG/L
MERCURY	UNDER	0.005	MG/L
NICKEL	UNDER	0.03	MG/L
SILVER	UNDER	0.05	MG/L
ZINC	EQUALS	0.2	MG/L
MAGNESIUM	EQUALS	0.03	MG/L
CHLORIDE	EQUALS	0.0	MG/L
ALUMINUM	UNDER	0.5	MG/L
POTASSIUM	UNDER	0.03	MG/L
SILICA	UNDER	0.5	MG/L
CHLORINE	EQUALS	0.0	MG/L

THIS REPORT FAILS THE REQUESTED ANALYSIS
FOR STERILITY.

CC: ED WRIGHT, LS-BIG-32
MSC PREVENTIVE MEDICINE DIV., DC-7
MSC CREW SYSTEMS DIV., EC-3
MSC LAUNCH SITE MEDICAL OPS. BRANCH, DOK
NORTH AMERICAN ROCKWELL, JOHNEY, CALIF.

STERILITY:

TOTAL BACTERIA = 4600 COL/150 ML
COLIFORM COUNT = NEGATIVE
ANEROBIC ANALYSIS = NEGATIVE
YEAST AND MOLDS = NEGATIVE

Analyst BUCK

Date Completed NOVEMBER 17, 1969

Approved by P. L. T. C. E.

Reference Notebook

P. L. T. C. E., MGR., ENVIRONMENTAL HEALTH ENGINEERING

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR.



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code H. CROSBY, MAR ZK-56	Request Date NOVEMBER 13, 1969
	Phone 867-5182
Sample Description APOLLO POTABLE WATER FROM HOT PORT, S/C 103, APOLLO 12, T-24 HOURS	Analysis Requested (Specification Required) PF SPEC 1B TO TEST POINT 3
Location PAD 30A, 4C LEVEL	

Received by BUCK Date 11/13/69 (L.S.) Log Number 6011-32H
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

pH = 6.7 @ 25°C
TOTAL RESIDUE = 2.6 MG/L
TASTE AND ODOR = NONE @ THRESHOLD ODOR No. 4
TURBIDITY = 0.3 UNITS
COLOR, TRUE = UNDER 5 UNITS

THIS REPORT FAILS THE REQUESTED ANALYSIS FOR
STERILITY.

CC: ED WRIGHT, LS-BIG-32
MSC PREVENTIVE MEDICINE DIV., DC-7
MSC CREW SYSTEMS DIV., EC-3
MSC LAUNCH SITE MEDICAL OPS. BRANCH, DOK
NORTH AMERICAN ROCKWELL, JONNEY, CALIF.

IONIC SPECIES:

CADMIUM	UNDER	0.005	MG/L
CHROMIUM	UNDER	0.05	MG/L
COPPER	UNDER	0.05	MG/L
IRON	UNDER	0.1	MG/L
LEAD	UNDER	0.05	MG/L
MANGANESE	UNDER	0.01	MG/L
MERCURY	UNDER	0.005	MG/L
NICKEL	EQUALS	0.2	MG/L
SILVER	UNDER	0.05	MG/L
ZINC	EQUALS	0.05	MG/L
MAGNESIUM	EQUALS	0.007	MG/L
CHLORIDE	EQUALS	0.0	MG/L
ALUMINUM	UNDER	0.5	MG/L
POTASSIUM	UNDER	0.03	MG/L
SILICA	UNDER	0.5	MG/L
CHLORINE	EQUALS	0.0	MG/L

STERILITY:

TOTAL BACTERIA = 30,000 COL/
150 ML
COLIFORM COUNT = NEGATIVE
ANAEROBIC ANALYSIS = NEGATIVE
YEAST AND MOLDS = NEGATIVE

Analyst BUCK Date Completed NOVEMBER 17, 1969
Approved by P. LaToire Reference Notebook _____
P. LATOIRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING

APPENDIX B

APOLLO 12 CHAMBER TESTS

<u>DATE</u>	<u>HOUR</u>	<u>EHE LOG NO.</u>	<u>ANALYSIS REQUESTED</u>
5/2/69	0900	6905-6	STERILIZATION OF WATER DISPENSER No. 003 (NR)
5/5/69	1130	6905-10	GSE, TEST POINT TWO LM-6 (GAEC)
5/23/69	SEA LEVEL SIMULATED TEST No. 1 (BACK-UP CREW) S/C 108		
5/28/69	0830	6905-85	STERILIZING OF WATER DISPENSER No. 0003 (GAEC)
5/28/69	0500	6905-95	FINAL FILL, TEST POINT THREE LM-6 (GAEC)
5/28/69	1000	6905-96	GSE, TEST POINT TWO S/C 108 (NR)
5/28/69	0800	6905-97	STERILIZING OF WATER DISPENSER No. 0004 (GAEC)
5/28/69	SEA LEVEL SIMULATED TEST No. 2 (PRIME CREW) S/C 108		
6/2/69	1330	6906-4	FINAL FILL, TEST POINT THREE S/C 108 (NR)
6/2/69		6906-6,8	LIQUID COOLING GARMENT Nos. 092 AND 093 (H-S)
6/3/69		6906-10	LIQUID COOLING GARMENT No. 096 (H-S)
6/3/69	SEA LEVEL SIMULATED TEST No. 1 (PRIME CREW) LM-6		
6/3/69	UNMANNED ALTITUDE CHAMBER TEST S/C 108		
6/4/69	0600	6906-11	T-24 HR TEST POINT THREE S/C 108 (NR)
6/4/69		6906-13	LIQUID COOLING GARMENT No. 092 (H-S)
6/4/69	1100	6906-14	STERILIZING OF WATER DISPENSER No. 0004 (GAEC)
6/6/69	SEA LEVEL SIMULATED TEST No. 2 (BACK-UP CREW) LM-6		
6/6/69	1800	6906-22	STERILIZING OF WATER DISPENSER GUN S/N 4136, FILTER No. 110
6/7/69	ALTITUDE CHAMBER TEST No. 1 (PRIME CREW) S/C 108		
6/9/69	0700	6906-20 D,H	T-24 HR TEST POINT THREE S/C 108 (NR)
6/10/69	ALTITUDE CHAMBER TEST No. 1 (BACK-UP CREW) S/C 108		
6/11/69	UNMANNED ALTITUDE CHAMBER TEST, LM-6		
6/12/69	0630	6906-34	T-24 HR TEST POINT THREE LM-6 (GAEC)

<u>DATE</u>	<u>HOUR</u>	<u>EHE LOG NO.</u>	<u>ANALYSIS REQUESTED</u>
6/12/69	0930	6906-37	LIQUID COOLING GARMENT No. 092 (H-S)
6/12/69	1700	6906-39	LIQUID COOLING GARMENT No. 093 (H-S)
6/13/69	ALTITUDE CHAMBER TEST No. 1 (PRIME CREW) LM-6		
6/13/69	0800	6906-40	STERILIZING OF WATER DISPENSER S/N 4136 (NR)
6/13/69	1030	6906-41	LIQUID COOLING GARMENT No. 089
6/13/69	1330	6906-43,44	POST-FLIGHT, TEST POINT THREE S/C 108 (NR)
6/13/69	1715	6906-45	LIQUID COOLING GARMENT No. 096
6/13/69	2000	6906-46	STERILIZING OF WATER DISPENSER No. 0004 (GAEC)
6/16/69	ALTITUDE CHAMBER TEST No. 2 (BACK-UP CREW) LM-6		
6/16/69	1730	6906-53	POST-FLIGHT, TEST POINT THREE LM-6 (GAEC)
6/17/18/69	UNMANNED ALTITUDE CHAMBER TEST LM-6		

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR.



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code

D. Jolly - NAR
ZE-36

Request Date

May 2, 1969

Phone

867-6200

Sample Description

I/M Drink Dispenser
Assembly S/N 003
Filter S/N 102, Gun S/N 3459

Analysis Requested (Specification Required)

CSD-A-372 Rev. A and
DE-S/C 103 - FCS 0014

Location

Environmental Health Laboratory

Received by Buck

Date May 2, 1969 (0900)

Log Number 6905-6

Priority: Routine

(Due Date)

A.S.A.P.

Emergency

ANALYSIS:

Final results following sterilization (organisms/100 ml)

Port A: Negative
Port B: Negative
Port C: Negative
Port A-GN₂: Negative

This sampling passes the requested analysis.

cc: Ed Wright, IS-ENG-32
Don Price, MEC Crew Systems Division (DC-3)
MEC Launch Site Medical Operations Branch (DDK)
Harry Stewart (DDK-11)
Titter, Flight Crew Systems (quality) (EK-18)
R. Sauer, Preventive Medicine (DC-7)

Analyst Buck

Date Completed May 6, 1969

Approved by Philip LaTorre

Reference Notebook

Philip LaTorre, Manager - Environmental Health Engineering

COPY



K S C
ENVIRONMENTAL HEALTH ENGINEERING
 Analysis Report



Requestor, Organization, Mail Code <p style="text-align: center;">J. PASSAMONTE, GAEC</p>	Request Date <p style="text-align: center;">MAY 5, 1969</p>
Sample Description <p style="text-align: center;">APOLLO POTABLE WATER FROM GSE LM-6</p>	Analysis Requested (Specification Required) <p style="text-align: center;">PF SPEC-1A TO TEST POINT 2</p>
Location <p style="text-align: center;">MSOB, CHAMBER R</p>	

Received by ANDERSON Date 5/5/69 (1130) Log Number 6905-10
 Priority: Routine _____ (Due Date) _____ A.S.A.P. _____ Emergency _____

ANALYSIS:

PH = 6.8 @ 25°C
 ELECTRICAL CONDUCTIVITY = 0.075 MICROMHOS/CM @ 25°C
 TOTAL RESIDUE = 0.5 MG/L
 FIXED RESIDUE = UNDER 0.5 MG/L
 TASTE AND ODOR = NONE @ THRESHOLD NO. 3
 TURBIDITY = 0.2 UNITS
 COLOR, TRUE = UNDER 5 UNITS
 PARTICULATES:

0-10 MICRONS = PASSES
 10-25 MICRONS = 19
 25-50 MICRONS = 3
 50-100 MICRONS = 1
 OVER 100 MICRONS = 0

THIS TEST PASSES THE REQUESTED ANALYSIS.

CC: Ed Wright, LS-ENG-32
 MSC CREW SYSTEMS DIVISION (EC-3)
 MSC LAUNCH SITE MEDICAL OPS. BRANCH (DDK)
 MSC PREVENTIVE MEDICINE DIV. (DC-7)

IONIC SPECIES:

CADMIUM	UNDER	0.005	MG/L
CHROMIUM	UNDER	0.05	
COPPER	UNDER	0.05	
IRON	UNDER	0.1	
LEAD	UNDER	0.05	
MANGANESE	UNDER	0.01	
MERCURY	UNDER	0.005	
NICKEL	UNDER	0.05	
SILVER	UNDER	0.05	
ZINC	UNDER	0.03	
MAGNESIUM	UNDER	0.005	
IODIDE	RESULTS TO FOLLOW		
POTASSIUM	UNDER	0.05	
SILICA	UNDER	0.5	
ALUMINUM	RESULTS TO FOLLOW		

STERILITY:

TOTAL BACTERIA = 1500 COL/100
 ML
 COLIFORM COUNT = NEGATIVE
 ANAEROBIC ANALYSIS = NEGATIVE
 YEAST AND MOLDS = NEGATIVE

Analyst Buck Date Completed MAY 7, 1969
 Approved by P. LaTorre Reference Notebook _____
 P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING

DEME RYNJB



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code

R. DAY
GAEC 41

Request Date

MAY 23, 1969

Phone

067-3576

Sample Description

L/N DRINK DISPENSER
ASSEMBLY S/N 0003
FILTER S/N 100, GUN S/N 3462

Analysis Requested (Specification Required)

CSD-A-372 REV. A AND
CSD-L15-35, DR030

Location

ENVIRONMENTAL HEALTH ENGR. LAB

Received by BUCK Date 5-23-69 (9839) Log Number 0085-35

Priority: Routine _____ (Due Date) _____ A.S.A.P. _____ Emergency _____

ANALYSIS:

FINAL RESULTS FOLLOWING STERILIZATION (ORGANISMS/100 ML)

	<u>TOTAL COUNT</u>	<u>COLIFORM COUNT</u>
PORT A:	NEGATIVE	NEGATIVE
PORT B:	NEGATIVE	NEGATIVE
PORT C:	NEGATIVE	NEGATIVE
PORT A-CH ₂ :	NEGATIVE	N/A

THIS STERILIZATION PASSES THE REQUESTED SPECIFICATIONS.

NOTE: IODINE CONCENTRATION MAINTAINED AT 95+ 5 PPM DURING STERILIZATION.

CC: ED WRIGHT, LS-ENG-32
DON PRICE, HSC CREW SYSTEMS DIVISION (EC-3)
HSC LAUNCH SITE MEDICAL OPERATIONS BRANCH (OK)
HARRY STEWART (ECK-11)

Analyst BUCK Date Completed MAY 26, 1969

Approved by [Signature] Reference Notebook _____
P. LATORRE, HSC, ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code J. PASSAMONTE, GAEC	Request Date MAY 20, 1969
	Phone 867-2945
Sample Description APOLLO POTABLE WATER, LM-6 FROM DESCENT TANK, FINAL FILL FOR CHAMBER TESTS	Analysis Requested (Specification Required) PF SPEC 1A TO TEST POINT 3
Location MSOD, ALTITUDE CHAMBER R	

Received by BUCK Date 5-28-69 (0500) Log Number 6205-05
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

PH = 6.0 @ 25°C
TOTAL RESIDUE = UNDER 0.5 MG/L
TASTE AND ODOR - NONE @ THRESHOLD ODOR NO. 3
TURBIDITY = 0.2 UNITS
COLOR, TRUE - UNDER 5 UNITS
PARTICULATE/500 ML
 0-10 MICRONS = 200
 10-25 MICRONS = 115
 25-50 MICRONS = 41
 50-100 MICRONS = 13
 100-250 MICRONS = 14
 OVER 250 MICRONS = 1*

***FIBER - 600 MICRONS**

THIS REPORT PASSES THE REQUESTED ANALYSIS.

CC: ED WRIGHT, LS-ENG-32
MSC PREVENTIVE MEDICINE DIVISION, DC-7
MSC CREW SYSTEMS DIVISION - EC3
MSC LAUNCH SITE MEDICAL OPS. BRANCH - DDK

IONIC SPECIES:

CADMIUM	UNDER	.005	MG/L
CHROMIUM	UNDER	.05	MG/L
COPPER	UNDER	.05	MG/L
IRON	UNDER	.1	MG/L
LEAD	UNDER	.05	MG/L
MANGANESE	UNDER	.03	MG/L
MERCURY	UNDER	.003	MG/L
NICKEL	UNDER	.03	MG/L
SILVER	UNDER	.05	MG/L
ZINC	UNDER	.03	MG/L
MAGNESIUM	UNDER	.003	MG/L
IODIDE	UNDER	.01	MG/L
ALUMINUM	UNDER	.05	MG/L
POTASSIUM	UNDER	.05	MG/L
SILICA	UNDER	.5	MG/L
IODINE	UNDER	0.1	MG/L

STERILITY:

TOTAL BACTERIA = NEGATIVE
COLIFORM COUNT = NEGATIVE
ANAEROBIC ANALYSIS = NEGATIVE
YEAST AND MOLDS = NEGATIVE

Analyst BUCK Date Completed JUNE 2, 1969
Approved by P. LaTorre Reference Notebook _____
P. LATORRE, HGR., ENVIRONMENTAL HEALTH ENGINEERING

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR.



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code

J. PASSANICTE, GAEC

Request Date

MAY 25, 1969

Phone

0-7-2 05

Sample Description

SPILLS IN TANK DRYED. L.L. FROM
FACILITY. FINAL FILL FOR
CHARGED TANKS

Analysis Requested (Specification Required)

PF SPEC 14 TO TEST POINT 3

Location

11000, ALTITUDE CHAMBER II

Received by DUCK

Date 5-22-69 (JSD)

Log Number 0000-05

Priority: Routine

(Due Date)

A.S.A.P.

Emergency

ANALYSIS:

pH = 6.1 @ 25°C

TOTAL RESIDUE - 0.0 mg/L

TASTE AND ODOR - NONE - THRESHOLD ODOR No. 3

TURBIDITY - 0.2 UNITS

COLOR, TRUE - UNDER 5 UNITS

PARTICULATE/500 ML

0-10 MICRONS = 200

10-25 MICRONS = 60

25-50 MICRONS = 10

50-100 MICRONS = 4

100-250 MICRONS = 2

OVER 250 MICRONS = 0

*ONE FIBER

THIS REPORT PASSES THE REQUESTED ANALYSIS.

CC: ED WRIGHT, LS-ENG-32

NSC PREVENTIVE MEDICINE DIVISION, DC-7

NSC CREW SYSTEMS DIVISION, EC-3

NSC LAUNCH SITE MEDICAL OPS. BRANCH, DSK

IONIC SPECIES:

CADMIUM	EQUALS	.01	mg/L
CHROMIUM	UNDER	.05	mg/L
COPPER	UNDER	.05	mg/L
IRON	UNDER	.1	mg/L
LEAD	UNDER	.05	mg/L
MANGANESE	UNDER	.05	mg/L
MERCURY	UNDER	.003	mg/L
NICKEL	UNDER	.05	mg/L
SILVER	UNDER	.05	mg/L
ZINC	EQUALS	.05	mg/L
MAGNESIUM	EQUALS	.04	mg/L
IODIDE	UNDER	0.1	mg/L
ALUMINUM	UNDER	.05	mg/L
POTASSIUM	UNDER	.05	mg/L
SILICA	UNDER	.5	mg/L
IODINE	UNDER	0.1	mg/L

STERILITY:

TOTAL BACTERIA = NEGATIVE

COLIFORM COUNT = NEGATIVE

PHAGEODIC ANALYSIS = NEGATIVE

YEAST AND MOLDS = NEGATIVE

Analyst DUCK

Date Completed JUNE 2, 1969

Approved by [Signature]

Reference Notebook

F. LATOURE, INC., ENVIRONMENTAL HEALTH ENGINEERING

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR.



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code H. C. ASKEY, WAF ZK-36	Request Date May 29, 1969
	Phone 607-5102
Sample Description PULLED PORTABLE WATER S/C 100 FROM TROOP SUPPORT EQUIPMENT FOR CHINAID TESTS	Analysis Requested (Specification Required) PE SPEC 1A TO TEST POINT 2
Location NSC, ALTITUDE CHANGH L	

Received by UNISHT, 44000 Date 5-29-69 (10:0) Log Number 000000
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

ELECTRICAL CONDUCTIVITY = 0.04 MICROMHOS/CM
PH = 6.9
TOTAL RESIDUE = .9 MG/500
FIXED RESIDUE = 0/A
TASTE AND ODOR = NONE @ THRESHOLD NO. 3
TURBIDITY = 0.2 UNITS
COLOR, TRUE = UNDER 5 UNITS
PARTICULATES/500 ML
0-10 MICRONS = PASSES
10-25 MICRONS = 10
25-50 MICRONS = 2
50-100 MICRONS = 1
OVER 100 MICRONS = 0

THIS REPORT PASSES THE REQUESTED ANALYSIS.

CC: 25 UNISHT, LS-702-02
NSC Preventive Medicine Division, DC-7
NSC Camp Systems Division, LC-5
NSC Launch Site Medical Ops. Branch, DOK
NORTH AMERICAN ROCKWELL, DONLEY, CALIF.

IONIC SPECIES:

CADMIUM	UNDER	.005	MG/L
CHROMIUM	UNDER	.05	MG/L
COPPER	UNDER	.05	MG/L
IRON	UNDER	.1	MG/L
LEAD	UNDER	.05	MG/L
MANGANESE	UNDER	.15	MG/L
MERCURY	UNDER	.05	MG/L
NICKEL	UNDER	.05	MG/L
SILVER	UNDER	0.05	MG/L
ZINC	UNDER	.05	MG/L
MAGNESIUM	UNDER	.003	MG/L
CHLORIDE		0.0	MG/L
ALUMINUM	UNDER	.05	MG/L
POTASSIUM	UNDER	.05	MG/L
SILICA	UNDER	.5	MG/L

STERILITY:

TOTAL BACTERIA = 50,000 COL/100 ML
COLIFORM COUNT = NEGATIVE
ANAEROBIC ANALYSIS = NEGATIVE
YEAST AND MOLDS = NEGATIVE

Analyst DUCK Date Completed JUNE 2, 1969
Approved by [Signature] Reference Notebook _____
Sgt. LATONE, Hqs., ENVIRONMENTAL HEALTH ENGINEERING

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR.



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code KSC, 100 100-11	Request Date MAY 30, 1969
	Phone 307-5574
Sample Description L/D WATER DISPENSER ISSUE NO. 100-11 CON L/D 0155, FILTER S/N 105	Analysis Requested (Specification Required) 100-11-01, REV. 5 AND TPS #CSJ-L10-36-0
Location ENVIRONMENTAL HEALTH LABORATORY	

Received by DR Date 5-28-69 (1000) Log Number 0-9-17
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

FINAL RESULTS FOLLOWING STERILIZATION (ORGANISMS/100 ML)

	<u>TOTAL COUNT</u>	<u>CALIFORNIA COUNT</u>
PORT A	NEGATIVE	NEGATIVE
PORT B	NEGATIVE	NEGATIVE
PORT C	NEGATIVE	NEGATIVE
PORT A-City	NEGATIVE	N/A

THIS STERILIZATION PASSES THE REQUESTED SPECIFICATIONS.

CC: ED WRIGHT, LS-ENC-32
DON PRICE, KSC CREW SYSTEMS DIV. (EC-3)
KSC LAUNCH SITE MEDICAL OPERATIONS BRANCH (DDK)
HARRY STEWART (EC-11)
R. SAUER, PREVENTIVE MEDICINE DIV. (DC-7)

Analyst REQUIRTER Date Completed MAY 31, 1969
Approved by [Signature] Reference Notebook _____
P. LATONCE, MGR., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code IL CROKEY, MAR ZK-96	Request Date JUNE 2, 1969
	Phone 7-5102
Sample Description APOLLO POTABLE WATER CH 100, APOLLO 12 FINAL FILL, DRINK GUN	Analysis Requested (Specification Required) PF SPEC 1A TO TEST POINT 3
Location ALTITUDE CHAMBER L, HSCB	

Received by JENERY Date 6-2-69 (1969) Log Number 6006-4
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

DRINK GUN AND HOSE REMOVED FOR LEAK REPAIR. SAMPLE WAIVED PER MAR.

cc: LS-ENG-32
DC-7, HSC PREVENTIVE MEDICINE DIV.
EC-3, HSC CREW SYSTEMS DIV.
DDK, HSC LAUNCH SITE MEDICAL OPS. BRANCH
NORTH AMERICAN ROCKWELL, DONKEY, CALIF.

Analyst ADRIUS Date Completed JUNE 9, 1969
Approved by [Signature] Reference Notebook _____
P. LATONNE, Inc., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code M. CROSKY, NAR ZK-00	Request Date JUNE 2, 1969
	Phone 7-5102
Sample Description APOLLO POTABLE WATER CH 100, APOLLO 12 FINAL FILL, WASTE TANK	Analysis Requested (Specification Required) PARTICLE COUNT & TOTAL SOLIDS FOR ENGINEERING EVALUATION
Location ALTITUDE CHAMBER L, NSC0	

Received by DERBY Date 6/2/69 (1530) Log Number 0000-4
Priority: Routine _____ (Due Date) A.S.A.P. _____ Emergency _____

ANALYSIS:

TOTAL RESIDUE = 1 MG/L

PARTICULATE/500 ML

0-10 MICRONS = PASSES

10-25 MICRONS = 126

25-50 MICRONS = 24

50-100 MICRONS = 4

100-250 MICRONS = 0

CC: LS-ENG-32

Analyst ADRIUS Date Completed JUNE 9, 1969
Approved by [Signature] Reference Notebook _____
P. LATORRE, NCR., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code

H. CROSKY, NAB
ZK-06

Request Date

JUNE 2, 1960

Phone

7-5102

Sample Description

APOLLO POTABLE WATER
CH 100, APOLLO 12, FINAL FILL
HOT WATER PORT

Analysis Requested (Specification Required)

PF SPEC 1A TO TEST POINT 3

Location

ALTITUDE CHAMBER L, MS03

Received by SCHEIDT

Date JUNE 2, 1960 (1960)

Log Number 0000-4

Priority: Routine

A.S.A.P.

Emergency

(Due Date)

ANALYSIS:

pH = 6.4 @ 25°C

TOTAL RESIDUE = 2.6 mg/L

TASTE AND ODOR = NONE @ THRESHOLD ODOR NO. 3 (45°C)

TURBIDITY = 0.5 UNITS

COLOR, TRUE = UNDER 5 UNITS

THIS REPORT FAILS THE REQUESTED ANALYSIS FOR
STERILITY.

CC: ED WRIGHT, LS-ENG-32
NSC PREVENTIVE MEDICINE DIV., DC-7
NSC CREW SYSTEMS DIV., EC-3
NSC LAUNCH SITE MEDICAL OPS. BRANCH, DEX
NORTH AMERICAN ROCKWELL, JOHNEY, CALIF.

IONIC SPECIES:

CADMIUM	UNDER	.01	mg/L
CHROMIUM	UNDER	0.01	mg/L
COPPER	EQUALS	.07	mg/L
IRON	UNDER	.1	mg/L
LEAD	UNDER	0.005	mg/L
MANGANESE	UNDER	.01	mg/L
MERCURY	UNDER	0.01	mg/L
NICKEL	EQUALS	.3	mg/L
SILVER	UNDER	.05	mg/L
ZINC	EQUALS	.06	mg/L
MANGANIUM	EQUALS	.02	mg/L
CHLORIDE	EQUALS	0.05	mg/L
ALUMINUM	UNDER	10	mg/L
POTASSIUM	UNDER	.05	mg/L
SILICA	UNDER	.5	mg/L
CHLORINE	EQUALS	0.0	mg/L

STERILITY:

TOTAL BACTERIA = 80,000 COL/100 ml
COLIFORM COUNT = NEGATIVE
ANAEROBIC ANALYSIS = NEGATIVE
YEAST AND MOLDS = NEGATIVE

Analyst ADKINS

Date Completed JUNE 9, 1960

Approved by

P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING

Reference Notebook



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code JEFF ROBERTS HAMILTON-STANDARD	Request Date JUNE 2, 1969
	Phone 7-4000
Sample Description HIGH PURITY WATER LCG #002	Analysis Requested (Specification Required) SPEC-C-27 CONDUCTIVITY AND PURITY
Location ECS BUILDING	

Received by ADRIUS Date 6-2-69 Log Number 6906-46
Priority: Routine _____ (Due Date) _____ A.S.A.P. _____ Emergency _____

ANALYSIS:

ELECTRICAL CONDUCTIVITY = .37 MICRONHOS/CM @ 25°C

PARTICULATE/500 ML

0-100 MICRONS = PASSES
100-200 MICRONS = 1
200-250 MICRONS = 0
OVER 250 MICRONS = 0

THIS SAMPLE PASSES THE REQUESTED ANALYSIS.

Analyst ADRIUS Date Completed JUNE 2, 1969
Approved by *P. Latorre* Reference Notebook _____
P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING

COPY



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code JEFF ROBERTS HAMILTON-STANDARD	Request Date 6/2/69
	Phone 7-4009
Sample Description HIGH PURITY LCG #093	Analysis Requested (Specification Required) SPEC-C-27 CONDUCTIVITY, PARTICULATE
Location ECS BLDG.	

Received by ADKINS Date 6/2/69 Log Number 6906-8
Priority: Routine _____ (Due Date) A.S.A.P. _____ Emergency _____

ANALYSIS:

PH = 6.8

CONDUCTIVITY = .65 MICROMHOS/CM @ 25°C.

PARTICULATE:

0-160 MICRONS = PASSES
160-200 MICRONS = 0
200-250 MICRONS = 0
OVER 250 MICRONS = 0

THIS SAMPLE PASSES THE REQUIRED ANALYSIS.

Analyst WRIGHT
Approved by P. LaTorre

Date Completed 6/2/69
Reference Notebook _____

P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING

COPY



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code JEFF ROBERTS HAMILTON-STANDARD	Request Date JUNE 3, 1969 <hr/> Phone 7-4009
Sample Description LIQUID COOLING GARMENT LCG #096	Analysis Requested (Specification Required) SPEC-C-27 CONDUCTIVITY AND PURITY
Location ECS BUILDING	

Received by ADKINS Date 6/3/69 Log Number 6906-10
 Priority: Routine _____ (Due Date) _____ A.S.A.P. _____ Emergency _____

ANALYSIS:

ELECTRICAL CONDUCTIVITY = .43 MICROMHOS/CM @ 25°C

PARTICULATE/500 ML

0-160 MICRONS = PASSES
 160-200 MICRONS = 0
 200-250 MICRONS = 0
 OVER 250 MICRONS = 0

Analyst WRIGHT Date Completed JUNE 4, 1969
 Approved by *P. LaTorre* Reference Notebook _____

P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code H. CROSBY, NAR ZK-06	Request Date JUNE 4, 1960
	Phone 7-5102
Sample Description APOLLO POTABLE WATER CH 100, APOLLO 12, T-24 PRIME CREW DRINK COU	Analysis Requested (Specification Required) PF SPEC 1A TO TEST POINT 3
Location ALTITUDE CHAMBER L, MS08	

Received by DELERY Date 6-4-60 (0000) Log Number 0000-11
Priority: Routine _____ (Due Date) A.S.A.P. _____ Emergency _____

ANALYSIS:

pH = 6.2 @ 25°C
TOTAL RESIDUE = UNDER 1.0 MG/L
TASTE AND ODOR = NONE @ THRESHOLD ODOR NO. 3
TURBIDITY = 0.2 UNITS
COLOR, TRUE = UNDER 5 UNITS
PARTICULATE/500 ML
 0-10 MICRONS = PASSES
 10-25 MICRONS = 26
 25-50 MICRONS = 11
 50-100 MICRONS = 3
 100-250 MICRONS = 2

THIS REPORT FAILS THE REQUESTED ANALYSIS
FOR STERILITY.

CC: Ed Wright, LS-ENG-32
MSC PREVENTIVE MEDICINE DIV., DC-7
MSC CREW SYSTEMS DIV., EC-3
MSC LAUNCH SITE MEDICAL OPS. BRANCH, DOK
NORTH AMERICAN ROCKWELL, DOWNEY, CALIFORNIA

IONIC SPECIES:

CADMIUM	UNDER	0.01	MG/L
CHROMIUM	UNDER	0.01	MG/L
COPPER	UNDER	0.05	MG/L
IRON	UNDER	0.1	MG/L
LEAD	UNDER	0.05	MG/L
MANGANESE	UNDER	0.01	MG/L
MERCURY	UNDER	0.01	MG/L
NICKEL	UNDER	0.05	MG/L
SILVER	UNDER	0.05	MG/L
ZINC	EQUALS	0.1	MG/L
MAGNESIUM	UNDER	0.005	MG/L
CHLORIDE	EQUALS	0.0	MG/L
ALUMINUM	UNDER	10	MG/L
POTASSIUM	UNDER	0.05	MG/L
SILICA	UNDER	0.5	MG/L

STERILITY:

TOTAL BACTERIA = 150,000 COL/
100 ML
COLIFORM COUNT = NEGATIVE
ANAEROBIC ANALYSIS = NEGATIVE
YEAST AND MOLDS = NEGATIVE

Analyst Buck Date Completed JUNE 6, 1960
Approved by P. LaTorne Reference Notebook _____
P. LATORNE, NGR., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code H. CROSBY, NRO 21030	Request Date JUNE 4, 1969
	Phone 7-5182
Sample Description APOLLO POTABLE WATER CH 100, APOLLO 12, T-24 PRIME CREW HOT WATER PORT	Analysis Requested (Specification Required) PF SPEC 1A TO TEST POINT 3
Location ALTITUDE CHAMBER L, NS03	

Received by DEBERRY Date JUN 4 1969 (0500) Log Number 0500-11
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

PH = 6.2 @ 25°C
TOTAL RESIDUE = 1.0 MG/L
TASTE AND ODOR = NONE @ THRESHOLD ODOR No. 3
TURBIDITY = 0.3 UNITS
COLOR, TIDE = UNDER 5 UNITS

THIS REPORT FAILS THE REQUESTED
ANALYSIS FOR STERILITY.

IONIC SPECIES:

CADMIUM	UNDER	0.01	MG/L
CHROMIUM	UNDER	0.01	MG/L
COPPER	UNDER	0.05	MG/L
IRON	UNDER	0.1	MG/L
LEAD	UNDER	0.05	MG/L
MANGANESE	UNDER	0.01	MG/L
MERCURY	UNDER	0.013	MG/L
NICKEL	EQUALS	0.5	MG/L
SILVER	UNDER	0.05	MG/L
ZINC	EQUALS	0.05	MG/L
MAGNESIUM	EQUALS	0.02	MG/L
CHLORIDE	EQUALS	0.0	MG/L
ALUMINUM	UNDER	10	MG/L
POTASSIUM	UNDER	0.05	MG/L
SILICA	UNDER	0.5	MG/L

STERILITY:

TOTAL BACTERIA = 40,000 COL/100 ML
COLIFORM COUNT = NEGATIVE
ANAEROBIC ANALYSIS = NEGATIVE
YEAST AND MOLDS = NEGATIVE

CC: ED WRIGHT, LS-ENG-32
NSC PREVENTIVE MEDICINE DIV., DC-7
NSC CREW SYSTEMS DIV., EC-3
NSC LAUNCH SITE MEDICAL OPS. BRANCH, DDK
NORTH AMERICAN ROCKWELL, DOWNEY, CALIF.

Analyst DUCK Date Completed JUNE 5, 1969
Approved by PPH Reference Notebook _____
J. LATOUCHE, JR., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code JEFF ROBERTS HAMILTON-STANDARD	Request Date JUNE 4, 1969
	Phone 7-4009
Sample Description HIGH PURITY WATER LOG #002	Analysis Requested (Specification Required) SPEC-C-27 CONDUCTIVITY AND PURITY
Location ECS BUILDING	

Received by ROBERTS Date 6-4-69 Log Number 7035-15
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

ELECTRICAL CONDUCTIVITY = .44 MICROMHOS/CM @ 25°C

PARTICULATE/500 ML

0-100 MICRONS = PASSES
100-200 MICRONS = 0
200-250 MICRONS = 0
OVER 250 MICRONS = 0

THIS SAMPLE PASSES THE REQUESTED ANALYSIS.

Analyst WRIGHT Date Completed JUNE 4, 1969
Approved by P. Latorre Reference Notebook _____
P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code R. DAY, GAEC GAEC-41	Request Date JUNE 4, 1969 Phone 7-3574
Sample Description L/N DRINK DISPENSER ASSEMBLY 2004 GUN S/N 4135, FILTER S/N 105	Analysis Requested (Specification Required) CSD-A-972, REV. A AND CSD-LH-6-20-9
Location ENVIRONMENTAL HEALTH LABORATORY	

Received by NEWHINTER Date 6-4-69 (1100) Log Number 6206-14
Priority: Routine _____ (Due Date) _____ A.S.A.P. _____ Emergency _____

ANALYSIS:

FINAL RESULTS FOLLOWING STERILIZATION (ORGANISMS/100 HL)

	<u>TOTAL COUNT</u>	<u>COLIFORM COUNT</u>
PORT A	NEGATIVE	NEGATIVE
PORT B	NEGATIVE	NEGATIVE
PORT C	NEGATIVE	NEGATIVE
PORT A-CH ₂	NEGATIVE	N/A

THIS STERILIZATION PASSES THE REQUESTED SPECIFICATIONS.

cc: ED WRIGHT, LS-ENG-32
DON PRICE, MSC CREW SYSTEMS DIV. (EC-3)
MSC LAUNCH SITE MEDICAL OPS. BRANCH (DDK)
R. SAUER, PREVENTIVE MEDICINE (DC-7)
HARRY STEWART (ECM-11)
TITTER, FLIGHT CREW SYSTEMS QUALITY (ZK-18) (NAR ONLY)

Analyst BUCK Date Completed JUNE 6, 1969
Approved by P. LATORRE Reference Notebook _____
P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING
NEWHINTER/HJD



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code D. JOLLY, MAR ZK-06	Request Date JUNE 6, 1969
	Phone 7-5102
Sample Description L/H DRINK DISPENSER ASSEMBLY A - CON S/N 4136, FILTER S/N 110	Analysis Requested (Specification Required) CSD-A-072, REV. A AND TPS-S/C 100 PPE 025
Location ENVIRONMENTAL HEALTH LABORATORY	

Received by DUCK Date 6-6-69 (1969) Log Number 6706-22
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

FINAL RESULTS FOLLOWING STERILIZATION (ORGANISMS/100 ML)

	<u>TOTAL COUNT</u>	<u>COLIFORM COUNT</u>
PORT A	NEGATIVE	NEGATIVE
PORT B	NEGATIVE	NEGATIVE
PORT C	NEGATIVE	NEGATIVE

THIS STERILIZATION PASSES THE REQUESTED SPECIFICATIONS.

CC: Ed Wright, LS-ENG-32
Don Price, ISC CREW SYSTEMS DIV. (EC-3)
ISC LAUNCH SITE MEDICAL OPS. BRANCH (AK)
Larry Stewart (ECK-11)
R. Sauch, PREVENTIVE MEDICINE (DC-7)
Titter, FLIGHT CREW SYSTEMS QUALITY (ZK-10) (MAR ONLY)

Analyst DUCK Date Completed JUNE 10, 1969
Approved by [Signature] Reference Notebook _____
P. Laforce, NGL, ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code

H. CROSBY, W/R
ZK-05

Request Date

JUNE 5, 1969

Phone

7-5102

Sample Description

APOLLO POTABLE WATER FROM
S/C 100, DRINK CON, T-24 DRS
BACKUP CREW OF APOLLO 12

Analysis Requested (Specification Required)

PF SPEC 1A TO TEST POINT 3

Location

ALTITUDE CHAMBER L, NSOC

Received by ANDERSON, WRIGHT

Date 6/17/69 (0700)

Log Number 6-11-210

Priority: Routine

(Due Date)

A.S.A.P.

Emergency

ANALYSIS:

ELECTRICAL CONDUCTIVITY = 1.2 MICROMHOS/CM @ 25°C

PH = 7.2 @ 25°C

TOTAL RESIDUE = 2.5 MG/L

TASTE AND ODOR = NONE @ THRESHOLD CONN NO. 3

TURBIDITY = 3.5 UNITS

COLOR, TRUE = UNDER 5 UNITS

PARTICULATE/500 ML*

0-10 MICRONS = PASSED

10-25 MICRONS = 1250

25-50 MICRONS = 210

50-100 MICRONS = 50

100-250 MICRONS = 5

*FILTER COVERED BY SMALL YELLOW PARTICLES.

THIS REPORT FAILS THE REQUESTED ANALYSIS
FOR STERILITY.

CC: ED WRIGHT, LS-ENG-32

NSC PREVENTIVE MEDICINE DIV., EC-7

NSC CREW SYSTEMS DIV., EC-3

NSC LAUNCH SITE MEDICAL OPS. BRANCH, LSC

NORTH AMERICAN ROCKWELL, DONNEY, CALIF.

IONIC SPECIES:

CADMIUM	UNDER	.005	MG/L
CHROMIUM	UNDER	.05	MG/L
COPPER	UNDER	.05	MG/L
IRON	UNDER	.1	MG/L
LEAD	UNDER	.05	MG/L
MANGANESE	EQUALS	.01	MG/L
MERCURY	UNDER	.005	MG/L
NICKEL	EQUALS	.05	MG/L
SILVER	UNDER	.05	MG/L
ZINC	EQUALS	.05	MG/L
MAGNESIUM	EQUALS	.05	MG/L
CHLORIDE		0.0	MG/L
ALUMINUM	UNDER	1	MG/L
POTASSIUM	UNDER	.05	MG/L
SILICA	UNDER	.5	MG/L

STERILITY:

TOTAL BACTERIA = 550,000 COU/
150ML

COLIFORM COUNT = NEGATIVE

AEROBIC ANALYSIS = NEGATIVE

YEAST AND MOLDS = NEGATIVE

Analyst

DOCK

Date Completed

JUNE 12, 1969

Approved by

Reference Notebook

P. LINDEN, JR., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
 Analysis Report



Requestor, Organization, Mail Code IL, CROSBY, NAR ZK-00	Request Date JUNE 5, 1969 Phone 7-5102
Sample Description APOLLO POTABLE WATER FROM S/C 100 HOT PORT, T-200 HOURS, BACKUP CREW CHAMBER TEST OF APOLLO 12	Analysis Requested (Specification Required) PF SPEC 1A TO TEST POINT 3
Location ALTITUDE CHAMBER L, NSC	

Received by ANDERSON, URGENT Date 6-10-69 (5700) Log Number 6240-2011
 Priority: Routine _____ (Due Date) _____ A.S.A.P. _____ Emergency _____

ANALYSIS:

ELECTRICAL CONDUCTIVITY = 1.1 MICROMHOS/CM @ 25°C

PH = 7.1 @ 25°C

TASTE AND ODOR = NONE @ THRESHOLD ODOR NO. 3

TURBIDITY = 0.9 UNITS

COLOR, TRUE = UNDER 5 UNITS

THIS REPORT FAILS THE REQUESTED ANALYSIS FOR
 STERILITY.

cc: ED URGENT, LS-ENG-32
 NSC PREVENTIVE MEDICINE DIV., DC-7
 NSC CREW SYSTEMS DIV., EC-3
 NSC LAUNCH SITE MEDICAL OPS. BRANCH, DEX
 NORTH AMERICAN ROCKWELL, DOWNEY, CALIF.

IONIC SPECIES:

CADMIUM	UNDER	.005	MG/L
CHROMIUM	UNDER	.05	MG/L
COPPER	UNDER	.05	MG/L
IRON	UNDER	.1	MG/L
LEAD	UNDER	.05	MG/L
MANGANESE	UNDER	.01	MG/L
MERCURY	UNDER	.005	MG/L
NICKEL	EQUALS	.2	MG/L
SILVER	UNDER	.05	MG/L
ZINC	UNDER	.05	MG/L
NACHESION	EQUALS	.05	MG/L
CHLORIDE		0.0	MG/L
ALUMINUM	UNDER	1	MG/L
POTASSIUM	UNDER	.05	MG/L
SILICA	UNDER	.5	MG/L

STERILITY:

TOTAL BACTERIA = 525,000 COL/
 150 ML

COLIFORM COUNT = NEGATIVE
 PHACROBIC ANALYSIS = NEGATIVE
 YEAST AND MOLDS = NEGATIVE

Analyst DUCK Date Completed JUNE 12, 1969
 Approved by [Signature] Reference Notebook _____
 W. LATONNE, JR., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code

J. PASSANOUTE, GEC

Request Date

JUNE 12, 1969

Phone

7-2945

Sample Description

APOLLO POTABLE WATER FROM LM-6
DESCENT TANK, T-20 HOURS

Analysis Requested (Specification Required)

PF SPEC 1A TO TEST POINT 3

Location

ALTITUDE CHAMBER R, HSCB

Received by

(GENTHER)

Date

6/12/69 (HSCB)

Log Number

0200-30

Priority:

Routine

(Due Date)

A.S.A.P.

Emergency

ANALYSIS:

PH = 6.9 @ 25°C

TOTAL RESIDUE = .4 MG/L

TASTE AND ODOR = NONE @ THRESHOLD ODOR NO. 3

TURBIDITY = .25 UNITS

COLOR, TRUE = UNDER 5 UNITS

PARTICULATE/500 ML

0-10 MICRONS = PASSES

10-25 MICRONS = 270

25-50 MICRONS = 70

50-100 MICRONS = 9

100-250 MICRONS = 4

THIS REPORT FAILS THE REQUESTED ANALYSIS
FOR STERILITY.

CC: Ed Wright, LS-600-32

HSC PREVENTIVE MEDICINE DIVISION, JC-7

HSC CREW SYSTEMS DIVISION, EC-3

HSC LAUNCH SITE MEDICAL OPS. BRANCH, DIX

IONIC SPECIES:

CADMIUM	UNDER	.005	MG/L
CHROMIUM	UNDER	.05	MG/L
COPPER	UNDER	.05	MG/L
IRON	UNDER	0.1	MG/L
LEAD	UNDER	.15	MG/L
MANGANESE	UNDER	.01	MG/L
MERCURY	UNDER	.005	MG/L
NICKEL	UNDER	.05	MG/L
SILVER	UNDER	.05	MG/L
ZINC	UNDER	.05	MG/L
MAGNESIUM	UNDER	.003	MG/L
IODIDE	UNDER	0.1	MG/L
ALUMINUM	UNDER	0.5	MG/L
POTASSIUM	UNDER	.05	MG/L
SILICA	UNDER	0.5	MG/L
IODINE	UNDER	0.1	MG/L

STERILITY:

TOTAL BACTERIA = 13 COL/100 ML
COLIFORM COUNT = NEGATIVE
ANAEROBIC ANALYSIS = NEGATIVE
YEAST AND MOLDS = NEGATIVE

Analyst

DUCH

Date Complete

JUNE 13, 1969

Approved by

P. LATOUC, JR., ENVIRONMENTAL HEALTH ENGINEERING

Reference Notebook



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code JEFF ROBERTS HAMILTON-STANDARD	Request Date JUNE 12, 1969
	Phone 7-4000
Sample Description HIGH PURITY WATER LCG #002	Analysis Requested (Specification Required) SPEC C-27 FOR CONDUCTIVITY AND PARTICULATE
Location ECS BUILDING	

Received by ANDERSON Date 6/12/69 (0050) Log Number 6000-37
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Days Date)

ANALYSIS:

ELECTRICAL CONDUCTIVITY = 0.35 MICROMHOS/CM @ 25°C

PARTICULATES:

RANGE

0-160 MICRONS = PASSES
160-200 MICRONS = 0
200-250 MICRONS = 0
OVER 250 MICRONS = 0

THIS SAMPLE PASSES THE REQUESTED ANALYSIS.

Analyst ANDERSON Date Completed JUNE 12, 1969
Approved by *P. Latorre* Reference Notebook _____
P. LATORRE, Mgr., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code JEFF ROBERTS HAMILTON-STANDARD	Request Date 6/12/69
	Phone 7-4009
Sample Description HIGH PURITY WATER LCG #093	Analysis Requested (Specification Required) SPEC-C-27 FOR CONDUCTIVITY AND PARTICULATE
Location ECS BUILDING	

Received by BUCK Date 6/12/69 (1700) Log Number 6906-39
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

ELECTRICAL CONDUCTIVITY = 0.22 MICROMHOS/CM @ 25°C

PARTICULATE:

0-160 MICRONS = PASSES
160-200 MICRONS = 1
200-250 MICRONS = 1
OVER 250 MICRONS = 0

Analyst ANDERSON Date Completed 6-12-69
Approved by P. La Torre Reference Notebook _____
P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING

35.1



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code D. JOLLY, MAR ZK-86	Request Date JUNE 13, 1969
	Phone 7-5102
Sample Description L/H DRINK DISPENSER CUN S/N 4136	Analysis Requested (Specification Required) CSD-A-572, REV. A AND TPS-SC100-FCS035
Location ENVIRONMENTAL HEALTH LABORATORY	

Received by DOCK Date 6/13/69 (0000) Log Number 020043
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

FINAL RESULTS FOLLOWING STERILIZATION (ORGANISMS/100 ML)

TOTAL COUNT

PORT A **NEGATIVE**

PORT B **NEGATIVE**

PORT C **NEGATIVE**

PORT A-CH₂ **NEGATIVE**

THIS STERILIZATION PASSES THE REQUESTED SPECIFICATIONS. ONLY THE DRINK DISPENSER, NO FILTER, WAS STERILIZED.

cc: ED WRIGHT, LS-ENG-32
DON PRICE, HSC CREW SYS. DIV., EC-3
HSC LAUNCH SITE MED. OPS. BRANCH, DEX
HARRY STEWART, ECK-11
R. SAUER, PREVENTIVE MEDICINE, DC-7
TITTER, FLIGHT CREW SYS. QUALITY (ZK-18) (MAR ONLY)

Analyst ANDERSON Date Completed JUNE 19, 1969
Approved by P. LaTorre Reference Notebook _____
P. LaTorre, Mgr., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



28.1

Requestor, Organization, Mail Code

JEFF ROBERTS
HAMILTON-STANDARD

Request Date

JUNE 13, 1969

Phone

7-4000

Sample Description

HIGH PURITY WATER
LCG #000

Analysis Requested (Specification Required)

SPEC C-27 FOR CONDUCTIVITY AND
PARTICULATE

Location

ECS BUILDING

Received by WRIGHT

Date 6/13/69 (1030)

Log Number 6906-41

Priority: Routine _____
(Due Date)

A.S.A.P. _____

Emergency _____

ANALYSIS:

ELECTRICAL CONDUCTIVITY = 0.3 MICROMHOS/CM @ 25°C

PARTICULATE/500 ML

0-100 MICRONS = PASSES

100-200 MICRONS = 0

200-250 MICRONS = 0

OVER 250 MICRONS = 0

THIS SAMPLE PASSES THE REQUESTED ANALYSIS.

Analyst

BUCK

Date Completed

JUNE 13, 1969

Approved by

P. LaTorre
P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING

Reference Notebook



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



35-1

Requestor, Organization, Mail Code

IL CROSBY, NAR
ZK-86

Request Date

JUNE 13, 1969

Phone

7-5102

Sample Description

APOLLO WATER FROM WASTE TANK
S/C 108, APOLLO 12
POST FLIGHT

Analysis Requested (Specification Required)

PF SPEC 1A TO TEST POINT 3 PER REQUESTED
ANALYSIS

Location

TEST STAND, NSOD

Received by

DUCK

Date

6/13/69 (1369)

Log Number

0000-03

Priority:

Routine

A.S.A.P.

Emergency

(Due Date)

ANALYSIS:

pH = 6.9 @ 25°C

TOTAL RESIDUE = 4.2 mg/L

TASTE AND ODOR = NONE @ THRESHOLD ODOR No. 3

TURBIDITY = 3.6 UNITS

COLOR, TRUE = UNDER 5 UNITS

DISSOLVED OXYGEN = 36 mg/L

cc: Ed Wright, LSC-ENC-32

NSC Preventive Med. Div., DC-7

NSC CREW SYS. Div., EC-3

NSC LAUNCH SITE Med. Ops. Branch, LSC

NORTH AMERICAN ROCKWELL, DOWNY, CALIF.

IONIC SPECIES:

CADMIUM	UNDER	.005	mg/L
CHROMIUM	UNDER	0.05	mg/L
COPPER	UNDER	0.05	mg/L
IRON	UNDER	0.1	mg/L
LEAD	UNDER	0.05	mg/L
MANGANESE	UNDER	0.01	mg/L
MERCURY	UNDER	0.005	mg/L
NICKEL	EQUALS	0.1	mg/L
SILVER	UNDER	0.05	mg/L
ZINC	EQUALS	1.0	mg/L
MAGNESIUM	EQUALS	.02	mg/L
CHLORIDE		0.0	mg/L
ALUMINUM	UNDER	0.5	mg/L
POTASSIUM	UNDER	0.05	mg/L
SILICA	UNDER	0.5	mg/L

Analyst

DUCK

Date Completed

JUNE 19, 1969

Approved by

P. LATOBBE, NSC., ENVIRONMENTAL HEALTH ENGINEERING

Reference Notebook



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



35-1

Requestor, Organization, Mail Code

H. Crook, NRC
2K-06

Request Date

JUNE 13, 1960

Phone

7-5102

Sample Description

APOLLO WATER FROM POTABLE TANK OF
S/C 100, APOLLO 12
POST FLIGHT (DRINK CAN NOT ATTACHED)

Analysis Requested (Specification Required)

PF SPEC 1A TO TEST POINT 3 PER REQUESTED
ANALYSIS

Location

TEST STAND, H300

Received by

WRIGHT

Date

6/13/60 (1960)

Log Number

60-000

Priority: Routine

(Due Date)

A.S.A.P.

Emergency

ANALYSIS:

pH = 6.1 @ 25°C

TOTAL RESIDUE = 0.4 mg/L

TASTE AND ODOR = NONE @ THRESHOLD ODOR No. 3

TURBIDITY = 0.00 UNITS

COLOR, TRUE = UNDER 5 UNITS

DISSOLVED OXYGEN = 2.0 mg/L

THIS REPORT PASSES THE REQUESTED ANALYSIS.

cc: Ed Wright, LS-ENG-32

MSC PREVENTIVE MED. DIV., DC-7

MSC CREW SYS. DIV., EC-3

MSC LAUNCH SITE MED. OPS. BRANCH, DOK

NORTH AMERICAN ROCKWELL, DOWNIE, CALIF.

IONIC SPECIES:

CADMIUM	UNDER	.005	mg/L
CASEIN	UNDER	0.05	mg/L
COPPER	UNDER	0.05	mg/L
IRON	EQUALS	0.1	mg/L
LEAD	UNDER	.05	mg/L
MANGANESE	UNDER	0.01	mg/L
MERCURY	UNDER	0.005	mg/L
NICKEL	EQUALS	0.05	mg/L
SILVER	UNDER	0.05	mg/L
ZINC	EQUALS	0.05	mg/L
MAGNESIUM	EQUALS	0.2	mg/L
CHLORIDE	EQUALS	0.0	mg/L
ALUMINUM	UNDER	0.5	mg/L
POTASSIUM	UNDER	0.05	mg/L
SILICA	UNDER	0.5	mg/L

Analyst

Duck

Date Completed

JUNE 10, 1960

Approved by

P. LaTorre, NRC., ENVIRONMENTAL HEALTH ENGINEERING

Reference Notebook

COPY



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



Requestor, Organization, Mail Code JEFF ROBERTS, HAMILTON-STANDARD	Request Date 6/13/69
	Phone 7-4009
Sample Description HIGH PURITY WATER LCG #096	Analysis Requested (Specification Required) SPEC-C-27 FOR CONDUCTIVITY AND PARTICULATE
Location ECS BUILDING	

Received by BUCK Date 6/13/69 (1715) Log Number 6906-45
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

ELECTRICAL CONDUCTIVITY = 0.3 MICROMHOS/CM @ 25°C

PARTICULATE/500 ML

0-160 MICRONS = PASSES
160-200 MICRONS = 0
200-250 MICRONS = 0
OVER 250 MICRONS = 0

THIS SAMPLE PASSES THE REQUESTED ANALYSIS.

Analyst A. P. BUCK Date Completed 6/13/69
Approved by P. LaTorre Reference Notebook _____
P. LATORRE, MGR., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



35.1

Requestor, Organization, Mail Code R. DAY, CAEC CSC-91	Request Date JUNE 13, 1969
	Phone 7-5574
Sample Description L/N DRINK DISPENSER ASSEMBLY UUA CON S/N 4135, FILTER S/N 105	Analysis Requested (Specification Required) CSD-A-072, REV. A AND LHS-TPS-C33-11
Location ENVIRONMENTAL HEALTH LABORATORY	

Received by BUCK Date 6/13/69 (2000) Log Number 6000-46
Priority: Routine _____ A.S.A.P. _____ Emergency _____
(Due Date)

ANALYSIS:

FINAL RESULTS FOLLOWING STERILIZATION (ORGANISMS/100 ML)

	<u>TOTAL COUNT</u>
PORT A	NEGATIVE
PORT B	NEGATIVE
PORT C	NEGATIVE

THIS STERILIZATION PASSES THE REQUESTED SPECIFICATIONS.

CC: ED WRIGHT, LS-ENG-32
DON PRICE, MSC CREW SYS. DIV., EC-5
MSC LAUNCH SITE MED. OPS. BRANCH, BOX
HARRY STEWART, ECK-11
R. SAUER, PREVENTIVE MEDICINE, DC-7

Analyst BUCK Date Completed 6/19/69
Approved by P. LAFORCE Reference Notebook _____
P. LAFORCE, HGR., ENVIRONMENTAL HEALTH ENGINEERING



K S C
ENVIRONMENTAL HEALTH ENGINEERING
Analysis Report



35.1

Requestor, Organization, Mail Code J. PASSANONTE, CAEC	Request Date JUNE 16, 1969
	Phone 7-2345
Sample Description APOLLO POTABLE WATER FROM LM-6 APOLLO 12 DESCENT TANK (WITHOUT GUN ATTACHED)	Analysis Requested (Specification Required) PF SPEC 1A TO TEST POINT 3
Location ALTITUDE CHAMBER R, HSOB	

Received by COENTHER Date 6/16/69 (1750) Log Number 6040-55
Priority: Routine _____ (Due Date) _____ A.S.A.P. _____ Emergency _____

ANALYSIS:

PH = 6.4 @ 25°C
TOTAL RESIDUE = 1.2 MG/L
TASTE AND ODOR = NONE @ THRESHOLD ODOR No. 3
TURBIDITY = 0.05 UNITS
COLOR, TRUE = UNDER 5 UNITS
PARTICULATE/500 ML
 0-10 MICRONS = PASSES
 10-25 MICRONS = 301
 25-50 MICRONS = 207
 50-100 MICRONS = 57
 100-200 MICRONS = 40

**THIS REPORT FAILS THE REQUESTED ANALYSIS
FOR STERILITY.**

CC: Ed Wright, LS-ENG-32
HSC PREVENTIVE MED. DIV., DC-7
HSC CREW SYS. DIV., EC-3
HSC LAUNCH SITE MED. OPS. BRANCH, DOK

IONIC SPECIES:

CADMIUM	EQUALS	0.005	MG/L
CHROMIUM	UNDER	0.05	MG/L
COPPER	UNDER	0.05	MG/L
IRON	UNDER	0.1	MG/L
LEAD	UNDER	0.05	MG/L
MANGANESE	UNDER	0.01	MG/L
MERCURY	UNDER	0.005	MG/L
NICKEL	UNDER	0.03	MG/L
SILVER	UNDER	0.05	MG/L
ZINC	UNDER	0.05	MG/L
MAGNESIUM	UNDER	0.005	MG/L
IODIDE	UNDER	0.1	MG/L
ALUMINUM	UNDER	0.5	MG/L
POTASSIUM	UNDER	0.05	MG/L
SILICA	UNDER	0.5	MG/L
IODINE	UNDER	0.1	MG/L

STERILITY:

TOTAL BACTERIA = 1200 COL/100 ML
COLIFORM COUNT = NEGATIVE
PHAGEODIC ANALYSIS = NEGATIVE
YEAST AND MOLDS = NEGATIVE

Analyst Duck Date Completed JUNE 19, 1969
Approved by P. LaTorre Reference Notebook _____
P. LaTorre, MGR., ENVIRONMENTAL HEALTH ENGINEERING

END

DATE

FILMED

APR 3 1970